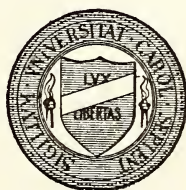


THE UNIVERSITY OF NORTH CAROLINA

THE ONE HUNDRED AND
TWENTY-FIFTH SESSION



ABRIDGED CATALOGUE
ANNOUNCEMENT OF COURSES
FOR 1919-1920

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1919

1919

APRIL							MAY							JUNE						
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1920

<div>JANUARY</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>	<div>FEBRUARY</div> <div><div>1234567891011121314151617181920212223242526272829</div></div>	<div>MARCH</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>
<div>APRIL</div> <div><div>123456789101112131415161718192021222324252627282930</div></div>	<div>MAY</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>	<div>JUNE</div> <div><div>123456789101112131415161718192021222324252627282930</div></div>
<div>JULY</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>	<div>AUGUST</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>	<div>SEPTEMBER</div> <div><div>123456789101112131415161718192021222324252627282930</div></div>
<div>OCTOBER</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>	<div>NOVEMBER</div> <div><div>123456789101112131415161718192021222324252627282930</div></div>	<div>DECEMBER</div> <div><div>12345678910111213141516171819202122232425262728293031</div></div>

CALENDAR

1919

<i>June 15-18</i>	<i>Sunday to Wednesday.</i> Commencement.
<i>June 24-August 8</i>	Summer School for Teachers.
<i>June 9-August 15</i>	Summer Law School.
<i>September 24-27</i>	<i>Wednesday to Saturday.</i> Examinations for Removal of Conditions.
<i>September 30-October 1</i>	<i>Tuesday and Wednesday.</i> Entrance Examinations. Registration.
<i>October 2</i>	<i>Thursday.</i> Fall Quarter begins.
<i>October 12</i>	<i>Sunday.</i> University Day.
<i>November 27</i>	Thanksgiving Day.
<i>December 20</i>	<i>Saturday.</i> Fall Quarter ends. Christmas Recess begins (1:30).

1920

<i>January 5</i>	<i>Monday.</i> Winter Quarter begins.
<i>March 20</i>	Winter Quarter ends.
<i>March 22</i>	Spring Quarter begins.
<i>April 4-11</i>	Easter Recess.
<i>May 15</i>	Selection of Commencement Orators.
<i>June 5-11</i>	Final Examinations.
<i>June 13</i>	<i>Sunday.</i> Baccalaureate Sermon. Sermon before Y. M. C. A.
<i>June 14</i>	<i>Monday.</i> Senior Class Day. Inter-Society Banquet and Reunions.
<i>June 15</i>	<i>Tuesday.</i> Alumni Day. Meeting of the Board of Trustees. Inter-Society Debate.
<i>June 16</i>	<i>Wednesday.</i> Commencement Day. Summer Vacation begins.
<i>September 22-25</i>	<i>Wednesday to Saturday.</i> Examinations for Removal of Conditions.

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Part One—Officers

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OFFICERS OF INSTRUCTION

FACULTY COMMITTEES



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ROBERT D. W. CONNOR, Secretary.

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JOHN NESTOR WILSON.....	Guilford
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ALBERT EDGAR WOLTZ.....	Gaston
GRAHAM WOODARD	Wilson
CHARLES WILLIAMS WORTH	New Hanover

*The legal term of office expires November 30th of the year indicated.

1921

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JAMES DICK PROCTOR	Robeson
ALFRED MOORE SCALES	Guilford
D. MATT THOMPSON.....	Iredell
CLEMENT GILLESPIE WRIGHT	Guilford

1923

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THOMAS CONTEE BOWIE	Ashe
CHASE BRENIZER	Mecklenburg
BENNEHAN CAMERON	Durham
ROBERT D. W. CONNOR	Wake
JULIUS FLETCHER DUNCAN	Carteret
ADOLPHUS HILL ELLER	Forsyth
JOHN WILLIAM FRIES	Forsyth
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WILLIAM LANIER HILL	Duplin
GEORGE ALLAN HOLDERNESS	Edgecombe
SAMUEL RICHARD HOYLE	Lee
GRAHAM KENAN	New Hanover

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RICHARD HENRY LEWIS	Wake
ADDISON GOODLOE MANGUM	Gaston
JAMES SMITH MANNING	Wake
JOHN ARCHIBALD PARKER	Mecklenburg
GEORGE MOORE PRITCHARD	Madison
ROBERT LEE SMITH	Stanly
WALTER FRANK TAYLOR	Wayne
THOMAS DAVIS WARREN	Craven
JOHN KENYON WILSON	Pasquotank
STANLEY WINBORNE	Hertford

1925

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DAVID COLIN BARNES	Hertford
JOHN GRAY BLOUNT	Beaufort
PERRIN BUSBEE	Wake
JULIAN SHAKESPEARE CARR	Durham
JOHN SOMERVILLE CUNINGHAM	Durham
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WILLIAM DUNN, JR.....	Craven
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*1920: V. S. BRYANT, W. P. BYNUM, J. S. CARR, JOSEPHUS DANIELS, R. D. CONNOR.

*1921: E. C. BROOKS, CLAUDIUS DOCKERY, J. W. GRAHAM, J. B. GRIMES, WALTER MURPHY.

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For 1917-1919: GRAHAM KENAN, W. N. EVERETT.

For 1918-1920: J. C. KITTRELL, C. G. WRIGHT.

For 1919-1921: Z. V. WALSER, STANLEY WINBORNE.

*Term expires.

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HARRY WOODBURN CHASE, Ph.D., Chairman of the Faculty.
WALTER DALLAM TOY, M.A., Secretary of the Faculty.
CHARLES THOMAS WOOLLEN, Business Manager.
JULIUS ALGERNON WARREN, Treasurer and Bursar.
THOMAS JAMES WILSON, JR., Ph.D., Registrar.
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CHARLES LEE RAPER, Ph.D., Dean of the Graduate School.
LUCIUS POLK McGEHEE, A.B., Dean of the School of Law.
ISAAC HALL MANNING, M.D., Dean of the School of Medicine.
EDWARD VERNON HOWELL, A.B., Ph.G., Dean of the School of Pharmacy.
MARCUS CICERO STEPHENS NOBLE, Dean of the School of Education.
MRS. THOMAS WILSON LINGLE, Adviser to Women.

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CORNELIA SPENCER LOVE, A.B., B.L.S., Assistant Librarian.
RACHEL AGNES HARRIS, Ph.M., B. L. S., Cataloger.
MARY LINDSAY THORNTON, In charge of the North Carolina Collection.
ALMA IRENE STONE, A.B., In charge of Periodicals and Bindings.
ELIZABETH TANNAHILL BAIN, Secretary to the Librarian.

*Absent on leave, in service of the United States.

†Died.

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WALTER REECE BERRYHILL, Student Assistant.
JOHN WILEY COKER, Student Assistant.
JASPER BENJAMIN HICKS, Student Assistant.
WILBUR WHITE STOUT, Student Assistant.
LEO DEATON SUMMEY, Student Assistant.

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LOUIS ROUND WILSON, Ph.D., Director.
EDGAR RALPH RANKIN, A.M., Assistant Director.

THE GYMNASIUM

ROBERT BAKER LAWSON, M.D., Director.

YOUNG MEN'S CHRISTIAN ASSOCIATION

ROBERT WILLIAM WUNSCH, A.B., General Secretary.

OFFICERS OF INSTRUCTION

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Ph.B., University of North Carolina, 1898; Librarian, *ibid.*, 1899; Instructor in English, *ibid.*, 1899-1901; Associate Professor of English, *ibid.*, 1901-1907; A.M., Columbia University, 1902; Student, *ibid.*, 1904-1905; Professor of English, University of North Carolina, 1907-1914; Dean of College of Liberal Arts, *ibid.*, 1909-1913; Acting President, *ibid.*, 1913-1914; President, *ibid.*, 1914-1918; LL.D., Erskine College, 1914; D.C.L., University of the South, 1914; LL.D., Wake Forest College, 1915; LL.D., Lafayette College, 1915.

†MARVIN HENDRIX STACY, A.M., Chairman of the Faculty. Professor of Civil Engineering.
Ph.B., University of North Carolina, 1902; Instructor in Mathematics, *ibid.*, 1902-1906; A.M., *ibid.*, 1904; Student, Cornell University, 1905, 1906, 1911; Associate Professor of Civil Engineering, University of North Carolina, 1906-1910; Professor of Civil Engineering, *ibid.*, 1910-1918; Acting Dean of the College of Liberal Arts, *ibid.*, 1913-1914; Dean of the College of Liberal Arts, *ibid.*, 1914-1918; Chairman of the Faculty, October, 1918-January, 1919.

HARRY WOODBURN CHASE, Ph.D., Chairman of the Faculty. Acting Dean of the College of Liberal Arts. Professor of Psychology.
A.B., Dartmouth College, 1904; A.M., Dartmouth College, 1908; Director of the Clinic for Subnormal Children, Clark University, 1909-1910; Ph.D., *ibid.*, 1910; Professor of Psychology, University of North Carolina, 1910—; Acting Dean of the College of Liberal Arts, October, 1918-January, 1919; Chairman of the Faculty, January, 1919—.

†KEMP PLUMMER BATTLE, A.M., LL.D., Professor Emeritus of History.
A.B., University of North Carolina, 1849; A.M., *ibid.*, 1852; Tutor in Mathematics, *ibid.*, 1850-1854; LL.D., Davidson College, 1879; President University of North Carolina, 1876-1891; Professor of History, *ibid.*, 1891-1907; LL.D., *ibid.*, 1910; Professor Emeritus of History, *ibid.*, 1907-1919.

†Died.

FRANCIS PRESTON VENABLE, Ph.D., D.Sc., LL.D., Kenan Professor of Chemistry.

Student, University of Virginia, 1874-1879; University of Bonn, 1879-1880; A.M., Ph.D., University of Goettingen, 1881; Student, University of Berlin, 1889; LL.D., University of Pennsylvania, 1901; D.Sc., Lafayette College, 1902; LL.D., University of South Carolina, 1905; LL.D., University of Alabama, 1906; LL.D., Jefferson Medical College, 1913; Professor of Chemistry, University of North Carolina, 1880-1918; President, *ibid.*, 1900-1914; Kenan Professor of Chemistry, *ibid.*, 1918—.

WALTER DALLAM TOY, M.A., Professor of the Germanic Languages and Literatures.

M.A., University of Virginia, 1882; Student, University of Leipzig, 1882-1883; University of Berlin, 1883-1885; College de France, 1885; Professor of Germanic Languages and Literatures, University of North Carolina, 1885—; Student, University of Berlin, 1910-1911.

WILLIAM CAIN, A.M., LL.D., Kenan Professor of Mathematics.

A.M., North Carolina Military Polytechnic Institute, 1866; Professor of Mathematics and Engineering, Carolina Military Institute, 1874-1879; Professor of Mathematics and Engineering, South Carolina Military Academy, 1882-1889; Professor of Mathematics, University of North Carolina, 1889-1918; Kenan Professor of Mathematics, *ibid.*, 1918—; LL.D., The University of South Carolina, 1916.

HENRY HORACE WILLIAMS, A.M., B.D., Professor of Philosophy.

A.B., A.M., University of North Carolina, 1883; Professor of Greek and German, Trinity College (N. C.), 1885; B.D., Yale University, 1888; Fellow, Harvard University, 1889; Professor of Philosophy, University of North Carolina, 1890—.

HENRY VAN PETERS WILSON, Ph.D., Kenan Professor of Zoology.

A.B., Johns Hopkins University, 1883; Fellow, *ibid.*, 1887-1889; Ph.D., *ibid.*, 1888; Professor of Biology, University of North Carolina, 1891-1904; Student, University of Berlin, 1902-1903; Professor of Zoology, University of North Carolina, 1904-1918; Kenan Professor of Zoology, *ibid.*, 1918—.

COLLIER COBB, A.M., D.Sc., Professor of Geology and Mineralogy.

A.B., Harvard University, 1889; A.M., *ibid.*, 1894; Assistant in Geology, *ibid.*, 1888-1890; Instructor in Geology, Massachusetts

Institute of Technology, 1890-1892; Instructor in Geology, Harvard Summer School, 1891; Assistant Professor of Geology, University of North Carolina, 1892-1893; Professor of Geology and Mineralogy, *ibid.*, 1893—; D.Sc., Wake Forest College, 1917.

CHARLES STAPLES MANGUM, A.B., M.D., Professor of Anatomy.

A.B., University of North Carolina, 1891; M.D., Jefferson Medical College, 1894; Assistant and Demonstrator, *ibid.*, 1894-1895; Graduate Student, University of Chicago, 1906; Professor of Anatomy, University of North Carolina, 1896—; Student, Harvard University, 1912, 1913.

EDWARD VERNON HOWELL, A.B., Ph.G., Professor of Pharmacy.

A.B., Wake Forest College, 1892; Ph.G., Philadelphia College of Pharmacy, 1894; Professor of Pharmacy and Dean of the School of Pharmacy, University of North Carolina, 1897—.

MARCUS CICERO STEPHENS NOBLE, Professor of Pedagogy.

Student, Davidson College and University of North Carolina; Commandant, Bingham School, 1880-1883; Superintendent of Schools, Wilmington, N. C., 1883-1898; Professor of Pedagogy, University of North Carolina, 1898—; Dean of the School of Education, *ibid.*, 1913—.

ISAAC HALL MANNING, M.D., Professor of Physiology.

Student, University of North Carolina, 1882-1886; Assistant in Chemistry, *ibid.*, 1886; M.D., Long Island College of Medicine, 1897; Graduate Student, University of Chicago, 1901, 1903; Harvard University, 1902, 1906; Professor of Physiology, University of North Carolina, 1901—; Dean of the School of Medicine, *ibid.*, 1905—.

GEORGE HOWE, Ph.D., Professor of the Latin Language and Literature.

A.B., Princeton University, 1897; A.M., Ph.D., University of Halle, 1903; Student, Oxford University, 1903; Professor of Latin Language and Literature, University of North Carolina, 1903—; Student, American School of Classical Studies at Rome, 1912-1913.

*JOSEPH HYDE PRATT, Ph.D., Professor of Economic Geology.

Ph.B., Yale University, 1893; Assistant in Chemistry, *ibid.*, 1894; Assistant in Mining, *ibid.*, 1895; Instructor in Mining, Harvard Summer School, 1895; Ph.D., Yale University, 1896; Instructor

*Absent on leave, in service of the United States.

in Mineralogy, *ibid.*, 1896-1897; Lecturer on Economic Geology, University of North Carolina, 1899-1904; Professor of Economic Geology, *ibid.*, 1904—; State Mineralogist, 1897-1906; State Geologist, 1906—.

NATHAN WILSON WALKER, A.B., Professor of Secondary Education.

A.B., University of North Carolina, 1903; Superintendent of Schools at Ashboro, N. C., 1903-1905; Professor of Secondary Education, University of North Carolina, 1905—; State Inspector of Public High Schools, 1905—.

WILLIAM DEBERNIERE MACNIDER, M.D., Kenan Professor of Pharmacology.

Assistant in Biology, University of North Carolina, 1899-1900; Assistant in Anatomy, *ibid.*, 1900-1901; M.D., *ibid.*, 1903; Student, University of Chicago, 1906, 1907, 1908; Professor of Pharmacology, University of North Carolina, 1905-1918; Kenan Professor of Pharmacology, *ibid.*, 1918—.

CHARLES LEE RAPER, Ph.D., LL.D., Professor of Economics.

A.B., Trinity College (N. C.), 1892; Instructor in Greek and Latin, *ibid.*, 1892-1893; Professor of Latin, Greensboro Female College, 1894-1898; Fellow in History, Columbia University, 1899-1900; Lecturer in History, *ibid.*, 1900-1901; Ph.D., *ibid.*, 1902; Associate Professor of Economics and History, University of North Carolina, 1901-1906; Professor of Economics, *ibid.*, 1906—; Dean of Graduate School, *ibid.*, 1909—; LL.D., Lenoir College, 1917.

WILLIAM CHAMBERS COKER, Ph.D., Professor of Botany.

B.S., University of South Carolina, 1894; Ph.D., Johns Hopkins University, 1901; Student, University of Bonn, 1901-1902; Associate Professor of Botany, University of North Carolina, 1902-1907; Professor of Botany, *ibid.*, 1908—.

ARCHIBALD HENDERSON, Ph.D., D.C.L., Professor of Pure Mathematics.

A.B., University of North Carolina, 1898; A.M., *ibid.*, 1899; Instructor in Mathematics, *ibid.*, 1898-1902; Student, University of Chicago, 1901; Ph.D., University of North Carolina, 1902; Fellow and Tutor in Mathematics, University College and University of Chicago, 1902-1903; Associate Professor of Mathematics, University of North Carolina, 1902-1908; Professor of Pure Mathematics,

ibid., 1908—; Student, Cambridge University, University of Berlin, the Sorbonne, 1910-1911; D.C.L., The University of the South, 1917.

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph.D., Alumni Professor of History.

M.A., University of the South, 1900; Ph.D., Columbia University, 1906; Associate Professor of History, University of North Carolina, 1906-1908; Professor of History, *ibid.*, 1908—.

ANDREW HENRY PATTERSON, A. M., Professor of Physics.

Ph.B., B.E., University of North Carolina, 1891; A.B., Harvard University, 1892; A.M., *ibid.*, 1893; Instructor in Physics, University of Georgia, 1894-1897; Adjunct Professor of Physics and Electrical Engineering, *ibid.*, 1897-1898; Professor of Physics and Astronomy, *ibid.*, 1898-1908; Student, University of Berlin and Charlottenburg Technische Hochschule, 1905-1906; Student, Cambridge University, 1906; Professor of Physics, University of North Carolina, 1908—; Dean of the School of Applied Science, *ibid.*, 1911—.

HENRY MCGILBERT WAGSTAFF, Ph.D., Professor of History.

Ph.B., University of North Carolina, 1899; Professor of Mathematics, Rutherford College (N. C.), 1900-1902; Ph.D., Johns Hopkins University, 1906; Acting Professor of Economics and History, Alleghany College, 1906-1907; Associate Professor of History, University of North Carolina, 1907-1909; Professor of History, *ibid.*, 1909—.

PATRICK HENRY WINSTON, Professor of Law.

Student, University of Texas, 1897-1898; University of North Carolina, 1899-1900; Graduate, United States Military Academy, 1905; Student, University of North Carolina School of Law, 1905; Professor of Law, *ibid.*, 1909—; Student, University of Michigan, 1910.

WILLIAM MORTON DEY, Ph.D., Professor of the Romance Languages and Literatures.

B.A., M.A., University of Virginia, 1902; Student in Paris, 1903; A.M., Harvard University, 1904; Austin Teaching Fellow, *ibid.*, 1905-1906; Ph.D., *ibid.*, 1906; Student in Spain and Italy, 1906; Assistant Professor of Romance Languages, University of Missouri, 1906-1909; Professor of Romance Languages, University of North Carolina, 1909—.

LUCIUS POLK McGEHEE, A.B., Professor of Law.

A.B., University of North Carolina, 1887; Student, School of Law, *ibid.*, 1890-1891; Professor of Law, *ibid.*, 1904—; Dean of the School of Law, *ibid.*, 1910—.

ATWELL CAMPBELL McINTOSH, A.M., Professor of Law.

A.B., Davidson College, 1881; A.M., *ibid.*, 1887; Professor of Law, Trinity College (N. C.), 1904-1910; Professor of Law, University of North Carolina, 1910—.

ALVIN SAWYER WHEELER, Ph.D., Professor of Organic Chemistry.

A.B., Beloit College, 1890; Student, University of Chicago, 1895; Student, Cornell University, 1897; A.M., Harvard University, 1897; Assistant in Chemistry, *ibid.*, 1897-1900; Ph.D., *ibid.*, 1900; Associate Professor of Chemistry, University of North Carolina, 1900-1912; Professor of Organic Chemistry, *ibid.*, 1912—; Student, University of Berlin, University of Bonn, Swiss Federal Polytechnic, 1910-1911.

LOUIS ROUND WILSON, Ph.D., Professor of Library Administration.

A.B., University of North Carolina, 1899; Librarian, *ibid.*, 1901—; A.M., *ibid.*, 1902; Ph.D., *ibid.*, 1905; Associate Professor of Library Administration, *ibid.*, 1908-1912; Student, Columbia University, 1910; Professor of Library Administration, University of North Carolina, 1912—; Director of the Bureau of Extension, *ibid.*, 1914—.

PARKER HAYWARD DAGGETT, S.B., Professor of Electrical Engineering.

Assistant in Electrical Engineering, Harvard University, 1908-1909; S.B., *ibid.*, 1910; Acting Professor of Electrical Engineering, University of North Carolina, 1910; Associate Professor of Electrical Engineering, *ibid.*, 1910-1913; Professor of Electrical Engineering, *ibid.*, 1913—; Acting Dean of the School of Applied Science, 1915-1916.

JAMES MUNSIE BELL, Ph.D., Professor of Physical Chemistry.

B.A., University of Toronto, 1902; M.A., *ibid.*, 1905; Assistant in Chemistry, Cornell University, 1902-1903; Graduate Scholar in Chemistry, *ibid.*, 1903-1904; Sage Fellow in Chemistry, *ibid.*, 1904-1905; Ph.D., *ibid.*, 1905; Associate Professor of Physical Chemistry, University of North Carolina, 1910-1913; Professor of Physical Chemistry, *ibid.*, 1913—.

EDWIN GREENLAW, Ph.D., Kenan Professor of English.

A.B., Northwestern University, 1897; A.M., *ibid.*, 1898; A.M., Harvard University, 1903; Ph.D., *ibid.*, 1904; Instructor in English, Northwestern University, 1898-1902, 1904-1905; Instructor in English, University of Chicago, 1904-1907; Professor of English, Adelphi College, 1905-1913; Professor of English, University of North Carolina, 1913-1918; Kenan Professor of English, *ibid.*, 1918—.

LESTER ALONZO WILLIAMS, A.M., Pd.D., Professor of School of Administration.

A.B., Dartmouth College, 1903; A.M., New York University, 1909; Ph.D., *ibid.*, 1912; Supervisor of Schools and Principal of High Schools in Massachusetts and New Hampshire, 1903-1912; Supervising Principal, Leonia, N. J., 1913; Lecturer, Brooklyn Institute of Arts and Sciences, 1913; Professor of School Administration, University of North Carolina, 1913—.

*JAMES BELL BULLITT, A.M., M.D., Professor of Histology and Pathology.

A.B., Washington and Lee University, 1894; A.M., *ibid.*, 1895; M.D., University of Virginia, 1897; Demonstrator of Anatomy, *ibid.*, 1898-1903; Professor of Anatomy and Pathology, University of Mississippi, 1903-1913; Professor of Histology and Pathology, University of North Carolina, 1913—.

THOMAS JAMES WILSON, JR., Ph.D., Registrar.

A.B., University of North Carolina, 1894; A.M., *ibid.*, 1896; Ph.D., *ibid.*, 1898; Instructor in Latin and Greek, *ibid.*, 1899-1901; Instructor in Latin, *ibid.*, 1901-1902; Student, University of Chicago, 1903, 1906; Associate Professor of Latin, University of North Carolina, 1902-1915; Registrar, *ibid.*, 1908—.

EUGENE CUNNINGHAM BRANSON, A.M., Kenan Professor of Rural Economics and Sociology.

A.M., Trinity College (N. C.), 1894; A.M., Peabody Normal College (Tenn.), 1899; President, Georgia State Normal School, 1900-1912; Professor of Rural Economics and Sociology, *ibid.*, 1912-1914; Professor of Rural Economics and Sociology, University of North Carolina, 1914-1919; Kenan Professor of Rural Economics and Sociology, *ibid.*, 1919—.

*Absent on leave, in service of the United States.

‡JAMES STUART ALLEN, Professor of Military Science and Director of Military Tactics.

Student, St. Andrews College, 1906-1910; Student, McGill University, 1910-1913; Captain in the Canadian Expeditionary Forces; Professor of Military Science and Director of Military Tactics, University of North Carolina, 1917-1918.

DUDLEY DEWITT CARROLL, M.A., Professor of Economics.

A.B., Guilford College, 1907; A.B., Haverford College, 1908; M.A., Columbia University, 1915; Professor of History and Economics, Guilford College, 1909-1914; Assistant Professor of Economics, Hunter College, 1916-1918; Professor of Economics, University of North Carolina, 1918—.

FREDERICK HENRY KOCH, A.M., Professor of Dramatic Literature.

A.B., Ohio Wesleyan University, 1900; A.M., Harvard University, 1909; Instructor in English, University of North Dakota, 1905-1906; Assistant Professor of Public Speaking, *ibid.*, 1907-1908; Assistant Professor of Dramatic Literature and Oratory, *ibid.*, 1908-1909; Associate Professor of Dramatic Literature and Oratory, University of North Dakota, 1914-1915; Professor of Dramatic Literature, *ibid.*, 1917-1918; Visiting Professor, University of California, Summer Session, 1910; Exchange Professor, University of Manitoba, 1918; Professor of Dramatic Literature, University of North Carolina, 1918—.

JOHN HARRIS MUSTARD, B.S. in E.E., Professor of Electrical Engineering.

B.S. in E.E., University of Michigan, 1904; Assistant in Electro-Therapeutics, University of Michigan, 1903-1904; In charge of instruction of graduate students in engineering, Westinghouse Electric and Manufacturing Company, 1909-1918; Professor of Electrical Engineering, University of North Carolina, 1918—.

JOHN EMERY LEAR, E.E., Professor of Engineering Sciences.

B.S. in E.E., Virginia Polytechnic Institute, 1901; Student, Cornell University, 1901-1902; Instructor in Physics and Electrical Engineering, Texas Agricultural and Mechanical College, 1905-1907; Assistant Professor of Electrical Engineering, *ibid.*, 1907-1909; E.E., *ibid.*, 1909; Associate Professor of Electrical Engineering, *ibid.*, 1909-1913; Professor of Physics, Norwich University, 1913—.

‡Resigned.

1914; Professor of Electrical Engineering, *ibid.*, 1913-1917; Professor of Engineering Sciences, University of North Carolina, 1918—.

EDWIN RICHARD PAGE, B.S. in E.E., Professor of Applied Electricity.

B.S. in E.E., University of Maine, 1913; Instructor in Electrical Engineering, Cornell University, 1914-1918; Professor of Applied Electricity, University of North Carolina, 1918-1919.

WILLIAM STANLY BERNARD, A.M., Associate Professor of Greek.

Student, Episcopal Theological Seminary (Va.), 1893-1895; A.B., University of North Carolina, 1900; Librarian, *ibid.*, 1900-1901; Instructor in Greek, *ibid.*, 1901-1906; A.M., *ibid.*, 1904; Associate Professor of Greek, *ibid.*, 1906—; Student, University of Chicago, 1906; Columbia University, 1909, 1910, 1911.

ROBERT BAKER LAWSON, M.D., Associate Professor of Anatomy.

Student, University of North Carolina, 1897-1900; M.D., University of Maryland, 1902; Instructor in Anatomy, University of North Carolina, 1905-1906; Demonstrator in Anatomy, *ibid.*, 1906-1908; Associate Professor of Anatomy, *ibid.*, 1908—.

GEORGE MCFARLAND MCKIE, A.M., Associate Professor of Public Speaking.

Graduate, Emerson College of Oratory, 1898; A.B., A.M., University of North Carolina, 1907; Student, Harvard University, 1907-1908; Instructor in English, University of North Carolina, 1899-1908; Associate Professor of Public Speaking, *ibid.*, 1908—.

JOHN MANNING BOOKER, Ph.D., Associate Professor of English.

A.B., Johns Hopkins University, 1901; Student, *ibid.*, 1901-1903, 1905-1909; Student, University of Munich, 1904-1905; Student, University of Heidelberg, 1903-1904, 1905, 1909, 1910, 1911; Ph.D., *ibid.*, 1912; Associate Professor of English, University of North Carolina, 1909—.

*OLIVER TOWLES, Ph.D., Associate Professor of Romance Languages.

A.B., University of Virginia, 1906; Student, Johns Hopkins University, 1906-1909; Student in France, 1908; Ph.D., Johns Hopkins University, 1912; Associate Professor of Romance Languages, University of North Carolina, 1909—.

*Absent on leave, in service of the United States.

THOMAS FELIX HICKERSON, A.M., S.B., Associate Professor of Civil Engineering.

Ph.B., University of North Carolina, 1904; Instructor in Mathematics, *ibid.*, 1905-1908; A.M., *ibid.*, 1907; S.B., Massachusetts Institute of Technology, 1909; Associate Professor of Civil Engineering, University of North Carolina, 1910—.

KENT JAMES BROWN, Ph.D., Associate Professor of German.

A.B., Dickinson College, 1901; Ph.D., University of Pennsylvania, 1905; Student, University of Berlin, 1904-1905; Student, University of Munich, 1909-1911; Assistant in German, University of Pennsylvania, 1902-1904; Instructor in German, State University of Iowa, 1911-1912; Associate Professor of German, University of North Carolina, 1912—.

NORMAN FOERSTER, A.M., Associate Professor of English.

A.B., Harvard University, 1910; Instructor in English, Harvard Summer School, 1910, 1913; Student, Harvard University, 1910-1911; Instructor in English, University of Wisconsin, 1911-1914; A.M., *ibid.*, 1912; Associate Professor of English, University of North Carolina, 1914—.

JAMES HOLLY HANFORD, Ph.D., Associate Professor of English.

A.B., University of Rochester, 1904; Ph.D., Harvard University, 1909; Assistant in English, *ibid.*, 1908; Instructor in English, *ibid.*, 1910-1913; Assistant Professor of English, Simmons College, 1909-1914; Associate Professor of English, University of North Carolina, 1914—.

JOHN GROVER BEARD, Ph.G., Associate Professor of Pharmacy.

Assistant in Pharmacy, University of North Carolina, 1908-1909; Ph.G., *ibid.*, 1909; Instructor in Pharmacy, *ibid.*, 1909-1914; Assistant Professor of Pharmacy, *ibid.*, 1914-1917; Associate Professor of Pharmacy, *ibid.*, 1917—.

WILLIAM WHATLEY PIERSON, JR., Ph.D., Associate Professor of History.

A.B., University of Alabama, 1910; Teaching Fellow in English, *ibid.*, 1910-1911; A.M., *ibid.*, 1911; A.M., Columbia University, 1912; Graduate Student, *ibid.*, 1911-1913; Assistant in History, *ibid.*, 1913-1914; Instructor in History, *ibid.*, 1914-1915; Ph.D., *ibid.*, 1916; Instructor in History, University of North Carolina, 1915-1917; Assistant Professor of History, *ibid.*, 1917-1918; Associate Professor of History, *ibid.*, 1918.

STURGIS ELLENO LEAVITT, Ph.D., Associate Professor of Romance Languages.

A.B., Bowdoin College, 1908; Student, Harvard University, 1912-1913; A.M., *ibid.*, 1913; Instructor in Romance Languages, Northwestern University, 1913-1914; Instructor in Romance Languages, Harvard University, 1915-1917; Ph.D., *ibid.*, 1917; Assistant Professor of Romance Languages, University of North Carolina, 1917-1918; Associate Professor of Romance Languages, *ibid.*, 1918—.

JAMES TALMAGE DOBBINS, Ph.D., Associate Professor of Chemistry.

A.B., University of North Carolina, 1911; A.M., *ibid.*, 1912; Ph.D., *ibid.*, 1914; Instructor in Chemistry, North Carolina State College of Agriculture and Engineering, 1914-1918; Associate Professor of Chemistry, University of North Carolina, 1918—.

THORNDIKE SAVILLE, C.E., Associate Professor of Engineering.

A.B., Harvard University, 1914; B.S., Dartmouth College, 1914; C.E., *ibid.*, 1915; M.S., Harvard University, 1917; M.S., Mass. Inst. Technology, 1917; Field Assistant in Surveying, Dartmouth College, Summers of 1914, 1915, 1916; Assistant in Physics, Dartmouth College, 1914-1915; Assistant in Geology, Harvard University, 1915-1917; Assistant in Sanitary Engineering, Harvard University, 1916-1917; Associate Professor of Engineering, University of North Carolina, 1919—.

*ROBERT LANE JAMES, C.E., Assistant Professor of Drawing.

Student in France, 1907-1908; C.E., Cornell University, 1912; Assistant Professor of Drawing, University of North Carolina, 1913-1919.

GEORGE KENNETH GRANT HENRY, Ph.D., Assistant Professor of Latin.

A.B., Hamilton College, 1900; A.M., *ibid.*, 1904; Instructor in Mathematics, University of North Carolina, 1908-1909; Instructor in Latin, *ibid.*, 1909-1914; Ph.D., *ibid.*, 1914; Assistant Professor of Latin, *ibid.*, 1914—.

§JOSEPH HENRY JOHNSTON, Ph.D., Assistant Professor of School Administration.

A.B., University of North Carolina, 1910; A.M., *ibid.*, 1914; Ph.D., University of Illinois, 1916; Assistant Professor of School Administration, University of North Carolina, 1916-1918.

*Absent on leave, in service of the United States.

§Killed in action in U. S. Army.

*HENRY McCUNE DARGAN, Ph.D., Assistant Professor of English. A.B., Mercer University, 1910; Student, University of California, 1910-1911; Student, University of Chicago, 1911; A.M., Harvard University, 1912; Ph.D., *ibid.*, 1914; Instructor in English, University of North Carolina, 1914-1917; Assistant Professor of English, *ibid.*, 1917—

RICHARD HURT THORNTON, A.M., Assistant Professor of English. A.B., Virginia Christian College, 1907; Graduate Student, Columbia University, 1911-1914; A.M., *ibid.*, 1914; Instructor in English, University of North Carolina, 1914-1917; Assistant Professor of English, *ibid.*, 1917—.

JOHN WAYNE LASLEY, A.M., Assistant Professor of Mathematics. A.B., University of North Carolina, 1910; Fellow in Mathematics, *ibid.*, 1910-1911; A.M., *ibid.*, 1911; Instructor in Mathematics, *ibid.*, 1911-1915; Fellow in Mathematics, Johns Hopkins University, 1915-1916; Instructor in Mathematics, University of North Carolina, 1916-1918; Assistant Professor of Mathematics, *ibid.*, 1918—.

GUSTAVE ADOLPHUS HARRER, Ph.D., Assistant Professor of Latin. A.B., Princeton University, 1910; Ph.D., *ibid.*, 1913; Instructor in Classics, *ibid.*, 1913-1915; Instructor in Latin, University of North Carolina, 1915-1918; Assistant Professor of Latin, *ibid.*, 1918—.

WILLIAM WALTER RANKIN, JR., A.M., Assistant Professor of Mathematics.

B.E., North Carolina College of Agriculture and Mechanic Arts, 1904; Professor of Mathematics, Fredericksburg College, 1908-1911; A.M., University of North Carolina, 1912; Fellow in Mathematics, *ibid.*, 1912-1913; Instructor in Mathematics, *ibid.*, 1913-1914, 1915-1918; Student, Harvard University, 1914-1915; Assistant Professor of Mathematics, University of North Carolina, 1918—.

HERMAN HENRY STAAB, M.A., Assistant Professor of Romance Languages.

Student, University of Tubingen, 1895-1898; Student, University of Halle, 1899; Student, University of Geneva, 1900; In France, Italy and Spain, 1901-1905; Argentina and Brazil, 1906; Harvard University, 1910, Summer Session; B.A., M.A., University of the

*Absent on leave, in service of the United States.

South, 1912; Modern Language Master, Sewanee Military Academy, 1910-1913; Professor of French, University of the South, Summer Quarter, 1914; Professor of Romance Languages, Converse College, 1913-1918; Professor of French, George Peabody College for Teachers, Summer Quarter, 1918; Assistant Professor of Romance Languages, University of North Carolina, 1918—.

*FRANK PORTER GRAHAM, M.A., Instructor in History.

A.B., University of North Carolina, 1909; Graduate Student, Columbia University, 1909-1910, 1912-1913; A.M., *ibid.*, 1916; Instructor in History, *ibid.*, 1914—.

*HENRY ROLAND TOTTEN, A.M., Instructor in Botany.

A.B., University of North Carolina, 1913; Assistant in Botany, *ibid.*, 1913-1914; A.M., *ibid.*, 1914; Instructor in Botany, *ibid.*, 1914—.

*SAMUEL HUNTINGTON HOBBS, JR., A.M., Instructor in Rural Economics and Sociology.

A.B., University of North Carolina, 1916; A.M., *ibid.*, 1917; Instructor in Rural Economics and Sociology, *ibid.*, 1916—.

*CLINTON WALKER KEYES, Ph.D., Instructor in Classics.

A.B., Princeton University, 1910; Ph.D., *ibid.*, 1913; Student, University of Berlin, 1913-1914; Instructor in Classics, Princeton University, 1914-1916; Instructor in Classics, University of North Carolina, 1916—.

JOHN MARCELLUS STEADMAN, JR., Ph.D., Instructor in English.

A.B., Wofford College, 1909; A.M., *ibid.*, 1912; Assistant in English, University of North Carolina, 1913-1914; Assistant in English, University of Chicago, 1915-1916; Ph.D., *ibid.*, 1916; Instructor in English, University of North Carolina, 1916—.

ALLAN WILSON HOBBS, Ph.D., Instructor in Mathematics.

A.B., Guilford College, 1907; A.B., Haverford College, 1908; Instructor in Mathematics, Guilford College, 1909-1911; Professor of Mathematics, *ibid.*, 1913-1915; Ph.D., Johns Hopkins University, 1917; Instructor in Mathematics, University of North Carolina, 1917—.

*Absent on leave, in service of the United States.

WILLIAM FRED MORRISON, Instructor in Drawing.

Student, University of North Carolina, 1914—; Instructor in Drawing, *ibid.*, 1917—.

HARRY MORRISON SHARP, A.B., Instructor in Physics.

A.B., Vanderbilt University, 1906; Student, University of Chicago, 1915-1917; Instructor in Physics, University of North Carolina, 1917—.

C. D. BEERS. Instructor in Botany.

Student, University of North Carolina, 1917—.

C. L. VOGLER, Instructor in Botany.

Student, University of North Carolina, 1915—.

I. W. SMITHEY, S.B., Instructor in Chemistry.

S.B., University of North Carolina, 1918.

C. M. HAZELHURST, Instructor in Mathematics.

Student, University of North Carolina, 1915—.

DONALD COBB, Assistant in Anatomy.

C. L. VOGLER, Assistant in Botany.

N. MOBLEY, Assistant in Botany.

W. B. RICHARDSON, Assistant in Chemistry.

H. G. SMITH, Assistant in Chemistry.

E. O. CUMMINGS, Assistant in Chemistry.

T. P. DAWSON, Assistant in Chemistry.

J. S. MURRAY, Assistant in Chemistry.

F. H. SPRY, Assistant in Chemistry.

H. M. TAYLOR, Assistant in Chemistry.

JAMES STRONG MOFFATT, JR., A.M., Assistant in English.

JAMES VIVAN WHITFIELD, A.B., Assistant in English.

J. C. BYNUM, Assistant in Geology.

H. T. DAVIS, Assistant in Geology.

W. H. ANDREWS, JR., Assistant in Geology.

N. MOBLEY, Assistant in Physics.

J. S. BABB, Assistant in Physics.

H. A. PATTERSON, Assistant in Physics.

W. E. PRICE, Assistant in Physics.

W. W. EAGLE, Assistant in Zoology.

L. E. CHAPPELL, Assistant in Zoology.

FACULTY COMMITTEES

The President is a member *ex officio* of all committees.

ADVISORY (*elected*). Professors Howe, McGehee, Patterson, Wilson, H. V., Wilson, L. R.

EXECUTIVE (*elected*). Professors Patterson, Daggett, Howe, Wagstaff.

ADVANCED STANDING. The Registrar, Professors Howe, Chase, Daggett.

ATHLETICS. Professors Mangum, Henderson, Howell, Lawson, Brown, Patterson.

ALUMNI CATALOGUE. The Registrar, Professors Hamilton, Battle, Mr. Rankin and Alumni representatives.

ALUMNI ORGANIZATIONS. Mr. Rankin, Professors Bernard, Hamilton, The Registrar.

CATALOGUE. Professors Daggett, Howe, Henry, Mustard, The Registrar.

CHAPEL. Professors Patterson, Daggett.

CLASS REUNIONS. Professor Bernard.

COMMONS. Professors Toy, McKie, Wheeler.

CORRESPONDENCE STUDY. Professors Williams, L. A., Howe, Pierson, Mr. Rankin.

COURSES OF STUDY. Professors Chase, Greenlaw, Howe, Patterson.

CURRICULUM. Professors Howe, Chase, Coker, Daggett, Dey, The Registrar.

DEBATES. Professors Williams, H. H., Raper, Bernard, Greenlaw.

DEGREES WITH DISTINCTION. Professors Greenlaw, Chase, Daggett, Hamilton, Henderson, Howe, Raper, Toy, Wilson, H. V.

DRAMATICS. Professors McKie, Howe.

ENTRANCE CERTIFICATES. Professors Williams, L. A., Daggett, Hamilton, Walker.

ENTRANCE CONDITIONS. The Registrar, Professors Daggett, Foerster, Henry.

GRADUATE SCHOOL. Professors Raper, Chase, Greenlaw.

GROUNDS AND BUILDINGS. Professors Coker, Cobb, MacNider, Wheeler.

LIBRARY. Professors Raper, Coker, Dey, Greenlaw, Foerster.

LIBRARY APPROPRIATIONS. Professors Raper, Wilson, H. V.

MACNAIR LECTURES. Professors Coker, Henderson, Williams, H. H.

PRESS ASSOCIATION. Professors Wilson, L. R., Thornton.

PUBLICATIONS. Professors Wilson, L. R., Hamilton, Coker, Hanford.

PUBLIC LECTURES. Professors Henderson, Howe, McGehee, MacNider, Coker.

PUBLIC OCCASIONS AND CELEBRATIONS. Professors Henderson, Hamilton, Patterson, Wheeler, Howe.

SCHEDULES. The Dean of the College and The Registrar.

SELF-HELP. Professors Bell, Wheeler, Hickerson.

STUDENT LIFE AND ACTIVITIES. Professors Booker, Wheeler, Wagstaff, Foerster, Thornton.

UNIVERSITY EXTENSION. Professors Wilson, L. R., Patterson, Noble, Raper, Cobb, Daggett, Chase, Williams, L. A., Branson, Walker, Greenlaw, Mr. Rankin.

UNIVERSITY MAGAZINE. Professors Cobb, Booker, Foerster, Thornton.

UNIVERSITY SERMONS. Professors Toy, Raper, McKie.

ENGLISH COMPOSITION. Professors Foerster, Bell, Carroll, Hanford, Leavitt, Pierson.

Part Two—General Information

THE UNIVERSITY

GROUNDS AND BUILDINGS

REGULATIONS

STUDENT GOVERNMENT

EXPENSES

PECUNIARY AID

MEDALS AND PRIZES

PUBLIC LECTURES

UNIVERSITY ORGANIZATIONS

THE UNIVERSITY

FOUNDATION AND GOVERNMENT. The University was established in obedience to the first Constitution of the State, which was adopted in December, 1776. A clause of section XLI declared that "all useful learning shall be duly encouraged, and promoted in one or more universities." The charter was granted by the General Assembly in 1789, the cornerstone of the Old East Building was laid in 1793, and the University was opened in 1795.

The title, preamble, and first section of the Act of incorporation are as follows:

"AN ACT TO ESTABLISH A UNIVERSITY IN THIS STATE."

"WHEREAS in all well regulated Governments, it is the indispensable Duty of every Legislature to consult the Happiness of a rising Generation, and endeavor to fit them for an honorable Discharge of the Social Duties of Life, by paying the strictest attention to their Education: And whereas an University supported by permanent Funds, and well endowed, would have the most direct Tendency to answer the above Purpose:

"I. *Be it therefore enacted by the General Assembly of the State of North Carolina, and it is hereby enacted by the Authority of the Same, That, Samuel Johnson, James Iredell, Charles Johnson, Hugh Williamson, Stephen Cabarus, Richard Dobbs Spaight, William Blount, Benjamin Williams, John Sitgreaves, Frederick Hargett, Robert Snead, Archibald Maclaine, Honourable Samuel Ashe, Robert Dixon, Benjamin Smith, Honourable Samuel Spencer, John Hay, James Hogg, Henry William Harrington, William Barry Grove, Reverend Samuel McCorkle, Adlai Osborne, John Stokes, John Hamilton, Joseph Graham, Honourable John Williams, Thomas Person, Alfred Moore, Alexander Mebane, Joel Lane, Willie Jones, Benjamin Hawkins, John Haywood, senior, John Macon, William Richardson Davie, Joseph Dixon, William Lenoir, Joseph M'Dowell, James Holland and William Porter, Esquires, shall be and they are hereby declared to be a body politic and corporate to be known and distinguished by the name of *The Trustees of the University of North Carolina** and by that name shall have perpetual Succession and a common Seal; and that they the Trustees and their Successors, by the Name aforesaid, or a Majority of them, shall be able and capable in Law to take, demand, receive and possess all Monies, Goods and Chattels that shall be given them for the Use of the said University,*

*The corporate name has been changed to The University of North Carolina.

and the same apply according to the Will of the Donors, and by Gift, Purchase or Devise to take, have, receive, possess, enjoy and retain to them and their Successors forever, any Lands, Rents, Tenements and Hereditaments, of what Kind, Nature or Quality soever the same may be, in special Trust and Confidence that the same or Profits thereof shall be applied to and for the Use and Purpose of establishing the said University." *

The University is governed by a board of trustees elected by the Legislature and is free from sectionalism, sectarian or political control. The Governor of the State is *ex officio* President of the Board of Trustees.

Article IV of the Constitution of 1876 contains the following provisions regarding the University:

"Sec. 6. The General Assembly shall have power to provide for the election of Trustees of the University of North Carolina, in whom, when chosen, shall be vested all the privileges, rights, franchises, and endowments thereof, in any wise granted to or conferred upon the Trustees of said University; and the General Assembly may make such provisions, laws, and regulations from time to time as may be necessary and expedient for the maintenance and management of said University.

"SEC. 7. The General Assembly shall provide that the benefits of the University, as far as practicable, be extended to the youth of the State free of expense for tuition; also all the property which has heretofore accrued to the State, or shall hereafter accrue, from escheats, unclaimed dividends, or distributive shares of the estate of deceased persons, shall be appropriated to the use of the University."

LOCATION. The seat of the University is Chapel Hill, Orange County, twenty-eight miles northwest of Raleigh. Two daily passenger trains run between Chapel Hill and University Junction, a station on the Southern Railway. The site for the institution was selected because of its healthfulness, its freedom from malaria, its supply of pure water, its beautiful scenery, and its central location in the State.

DEGREES. The degrees of Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy, Bachelor of Laws, Bachelor of Arts and Laws, Graduate of Pharmacy, Doctor of Pharmacy, and Pharmaceutical Chemist are conferred by vote of the Trustees, after the recommendation of the Faculty, upon candidates who have satisfied the requirements of residence

*Laws of the State of North Carolina, published by James Iredell, Edenton, 1791.

and study at the University. Students who are not candidates for a degree may elect any studies they wish, subject to the Committee on Courses, devoting their time entirely to one or two subjects, or selecting groups of such subjects as suit their tastes and purposes.

GENERAL CULTURE. Chapel Exercises are conducted in Gerrard Hall, with the reading of the scriptures and singing, every week-day morning except Saturday, at 10:30 o'clock. At the same hour timely talks are given by different members of the Faculty. Attendance at this service is required of all undergraduates, unless especially excused. Bible classes for young men are taught in each of the five churches of the village every Sunday. Religious services are held twice a week, or oftener, in each church. A series of sermons is delivered annually by the University preachers, chosen by the Trustees from the various denominations. Bible lectures are delivered every Sunday morning in Gerrard Hall. The Young Men's Christian Association meets three times a week, for prayer and other services, and conducts a series of Bible courses, which are largely attended by the students.

DISCIPLINE. The University endeavors to make young men manly and self-reliant, and to develop character by educating the conscience. The Faculty may, at their discretion, admonish, suspend, or dismiss students for neglect of duty, or for misconduct.

PHYSICAL TRAINING. Hearty encouragement is given to athletic sports and to all kinds of physical culture. The Emerson Athletic Field, the gift of Mr. Isaac Emerson of Baltimore, furnishes ample facilities for football and baseball, and the track is admirably adapted for running and general track athletics. Fifteen tennis courts are located on the campus. Systematic exercise in the Bynum Gymnasium under a skilled instructor is offered to all students in the University.

Exercise in the Gymnasium is required three hours a week of all Freshmen, unless excused by the Physical Director. In the fall, a thorough physical examination of each Freshman is made, and the heart, the lungs, the eyes, and the ears are tested, in order that students defective in physical development may be given special work under the personal supervision of the Director. Round shoulders, flat chests, curvature of the spinal column, hernia and mild cases of congenital paralysis are thus often greatly benefited and sometimes completely corrected.

MEDICAL ATTENTION. In order to secure responsible and efficient medical advice and to provide proper attention for the

student during sickness, the University employs a practicing physician and maintains a well appointed infirmary. The Infirmary is equipped with all necessary conveniences and comforts, is under the immediate supervision of the University Physician, and is provided with an experienced nurse. At the discretion of the University Physician a student may be admitted to its wards, and for such services as may be rendered by the staff no charges are made, but should any additional service (consultation, special nurses, operations requiring the attendance of a trained surgeon), recommended by the attending physician and approved by the parent or guardian, be necessary, the student will be required to pay for such services.

GROUND AND BUILDINGS

The University campus contains forty-eight acres of land, affording ample grounds for building and for all sorts of athletic sports. The University owns, contiguous to the campus, five hundred acres of forest lands, which are partly laid off in walks and drives. The University has twenty-six buildings.

BUILDINGS FOR GENERAL UNIVERSITY USES

The Alumni Hall contains the offices of administration, and nine lecture rooms.

Gerrard Hall is used for morning prayers, for mass meetings and other student assemblies, and for public lectures.

Memorial Hall commemorates the illustrious dead of the University. It is used at Commencement for public exercises.

BUILDINGS FOR SPECIAL PURPOSES

Smith Hall contains the Law Library, offices and lecture rooms of the School of Law.

The Peabody Building, the gift of the Peabody board, contains lecture rooms, offices, library, and auditorium of the School of Education, and is splendidly equipped in every detail.

The Young Men's Christian Association Building is a valuable adjunct to the work of the Association.

The William Preston Bynum, Jr., Gymnasium is the gift of Judge William Preston Bynum, in memory of his grandson, William Preston Bynum, Jr., of the class of 1893. It is furnished with modern apparatus, swimming pool, baths, lockers, and running track; and contains a trophy room and the office of the Instructor in Physical Training.

The Infirmary, a spacious and completely equipped building, is open to all students of the University.

Swain Hall contains a dining-room with a seating capacity of six hundred, kitchens, a bakery, and a cold storage plant.

The Power Plant completed in 1916 is a thoroughly modern, small central station. This plant furnishes electric power and water for the town of Chapel Hill and power, water and heat for all the University buildings.

LABORATORIES AND MUSEUMS

PHILLIPS HALL

Phillips Hall is located on the south side of Cameron Avenue, next to Memorial Hall on the west. It contains the Physical, Civil Engineering and Electrical Engineering Laboratories. The first floor contains a large auditorium with a balcony, laboratories for general Physics and advanced Physics, five class rooms, four offices, three apparatus rooms and a photographic room. The second floor contains a large drafting room for general engineering students, a smaller drafting room for advanced work, two class rooms, five offices and private drafting rooms and the Engineering Library. The basement contains a large dynamo laboratory, standardization laboratory, high-tension laboratory, radio-laboratory, materials and cement laboratories, storage battery room, and several other rooms for various purposes.

CHEMISTRY HALL

Chemistry Hall is located almost exactly due east of Alumni Hall. The main floor contains the large lecture hall and another small lecture room, a laboratory for Organic Chemistry, two for Quantitative Analysis, several private laboratories and the offices for the instructors. The second floor contains the laboratories for Elementary Chemistry, Qualitative Analysis, several private and research laboratories and the Chemical Library. The basement contains the store-rooms, a fire-proof room, a constant temperature room, an assay room, rooms for gas-analysis and photo-chemistry and a small lecture room.

THE GEOLOGICAL LABORATORY AND MUSEUM

The Geological Laboratory occupies the first floor of the New East building. In addition to a lecture room with a seating capacity of about fifty, there is a large laboratory supplied with working collections of minerals, rocks, and fossils, and with photographs, maps, and models illustrating geological structure. The laboratory is furnished with three petrographical microscopes, with four microscopes for soil study, and with apparatus for the slicing and polishing of rocks. Microscope slides have been made of most of the specimens from North Carolina; the department has, also, sections of the typical European rocks. Sections of the rocks around Chapel Hill, and the igneous rocks of the Boston

Basin, made by the late Hunter Lee Harris, of the class of 1889, were given to the geological department. There is a room for photographic work.

THE BIOLOGICAL BUILDING

The Biological Building, Davie Hall, is occupied by the Departments of Zoology and Botany. The building faces north and south, lies to the east of the New East and adjoins the Arboretum.

The first floor contains a room for charts and other lecture apparatus, a room for the storage of zoological specimens, a lecture room with a seating capacity of one hundred and twenty, and a laboratory for the elementary classes in zoology and botany.

The second floor is occupied by a large laboratory for advanced work in zoology, a similar laboratory for advanced work in botany, private work rooms for the professors of zoology and botany, two store-rooms, and a library. On the third floor is a photographic studio with windows on the north side extending to the floor, and with skylights. In the basement are a fire-proof incubator room, a room for micro-photography with adjoining dark room, janitor's shop, and rooms for the storage of heavy supplies. The wings in the basement are designed for the keeping of live animals and plants for experimental work in botany and zoology.

THE MEDICAL LABORATORY

The new Medical Building, Caldwell Hall, is located on the south side of Cameron Avenue opposite Davie Hall. The first floor contains four large laboratories for Histology, Embryology, Physiological Chemistry and Experimental Physiology, eight private laboratories for instructors, a large lecture hall and the amphitheatre for anatomical demonstrations. The second floor contains the Pathological, Bacteriological, and Pharmacological laboratories, ten private laboratories, the dissecting hall, two fire-proof rooms and the Medical Library. The basement contains the store-rooms, photographic room, refrigerating and gas plants, storage tanks for cadavers and provisions for the care of animals used for experimental purposes. The laboratories are well equipped with apparatus for the use of students and the research work of the instructors.

THE UNIVERSITY LIBRARY

The main Library is housed in a commodious modern library building erected in 1907, and represents an expenditure for construction and equipment of \$66,500. The reference, current periodical, and seminar rooms in the main Library are large, well lighted, and have table and seating capacity for two hundred students at one time.

Five special seminar rooms have been equipped in the general Library to facilitate advanced work in English and German Literatures and Languages, Greek and Latin Literatures and Languages, the Romance Literatures and Languages, History, and North Carolina History. Special scientific and professional collections are to be found in the libraries or seminars belonging to the departments in which such instruction is given. These collections are under the supervision of the instructors in the respective departments and the Librarian, and aid is given students in the use of books relating to their work.

The University Library contained at the end of the academic year eighty-three thousand eight hundred and eighty-five volumes and several thousand pamphlets.

In addition to the resources of the general reference room, the Library places at the disposal of students for reference purposes a collection of ten thousand bound periodicals covering all fields of general, technical, and professional information. A great number of the sets belonging to this collection are complete from their beginning.

Eight hundred and seventy-three current periodicals, transactions of literary, scientific, historical and other societies, university studies, serial publications, and a half hundred daily and weekly newspapers, continuing and supplementing the bound sets, are subscribed for or secured through exchange annually.

As the Library is a depository for the publications of the United States Government, it contains more than seven thousand volumes of material especially valuable for reference in debate and in the study of social and political science, useful arts, and the natural sciences.

DORMITORIES

The South Building contains one lecture room and thirty living rooms.

The Old East Building contains two lecture rooms and twenty-eight living rooms.

The Old West Building contains two lecture rooms, the Historical Museum, and twenty-seven living rooms.

The New West Building contains the Dialectic Literary Society's Hall, one lecture room, and eleven living rooms.

The New East Building contains the Philanthropic Literary Society's Hall, the Geological Laboratory and Museum, the offices of the North Carolina Geological Survey, and fourteen living rooms.

University Inn is used for dormitory purposes, and contains a dining hall for students.

The Carr Building, the gift of Gen. J. S. Carr, contains forty-two living rooms.

The Smith Building contains forty living rooms.

The New Dormitories, Battle, Vance, and Pettigrew Sections, contain seventy-two rooms en suite for the use of students.

REGULATIONS

REGISTRATION

All students are expected to present themselves for registration *Tuesday or Wednesday, September 30 or October 1, 1919*, between the hours of 9 a. m. and 5 p. m., at the office of the Registrar. A delayed registration fee of \$5 will be charged after these days and hours.

ARRANGEMENT OF COURSES

Every student, when he presents himself for registration, must submit a list of courses, required and elective, which he desires to pursue.

No student will be allowed to take less than three nor more than three and one-half courses without special permission of the Faculty.

Students desiring to change their courses must make written application to the Committee on Courses for the desired change. The application will be considered by the committee and the instructors in the departments concerned, and will be granted only after a careful consideration of the facts in each case. No changes will be permitted after the first Tuesday following the registration days except such as are granted after application to, and approval by, the Faculty.

Candidates for more than one degree shall not offer the same elective in two courses nor a required study in one course as an elective in another.

ASSIGNMENT OF ROOMS

The University buildings contain 165 furnished double rooms, 8 single furnished rooms, and 82 double unfurnished rooms available for the accommodation of students. These rooms are assigned to students by the Treasurer, at the beginning of each term, in the order of application.

The University reserves the right to require any student whom for any reason it considers an undesirable tenant to vacate a room in the University buildings.

All occupants are required to sign a contract, subject to the following special rules:

In order to retain his room for the next session, a student must file with the Treasurer before May 20th a room contract properly signed. Double rooms must be signed for by both intending occu-

pants. The rooms thus signed for will be retained until the last day of registration, provided a deposit of \$5 be paid by each intending occupant before August 1. The \$5 deposit will be forfeited in case the signer or signers do not themselves occupy the room and pay the full rent. Rooms not signed for or forfeited by failure to pay at the proper date will be assigned in the order of application. No dogs shall be kept in the University dormitories. Breach of this regulation leads to forfeiture of the room.

The right to occupy a room is not transferable and terminates with the expiration of the lease. Any attempt on the part of an occupant of a room to sell or transfer his right to occupancy shall be deemed a fraudulent transaction. The penalty of violating this rule shall be the forfeiture of the room by the new lessee.

The occupant of a room will be held directly responsible for any damage done to the furniture supplied in his room by the University.

CONDUCT

By order of the Board of Trustees the Faculty is directed to dismiss from the University any student who is known to engage in drinking intoxicating liquors, gambling, hazing in any form (presence at hazing is regarded as participation), or to be guilty of dissolute conduct.

Students persistently neglectful of duty, or addicted to boisterous conduct or rowdyism, may be required to leave the University.

Honorable dismissal has reference to conduct and character only. It will not be granted unless the student's standing as to conduct and character is such as to entitle him to continue in this University. Furthermore, in every statement of honorable dismissal full mention will be made of any probation, suspension, or other temporary restriction imposed for bad conduct which is still in force when the papers of dismissal are issued.

Statement of record has reference to the recorded results of a student's work in the classroom. It will in every instance contain all the important facts pertaining to the student's admission, classification, and scholarship. In particular, no partial or incomplete classroom record (for example, with failures omitted) will be given without clear evidence that it is partial or incomplete. If the student's scholarship has been such as to prevent his continuance in this University or to render him subject to any probation, suspension, or other temporary restriction which is still in force at the date of the record, a plain statement of any and all such facts will be included, and such information will be given as will make clear the system of grades employed, the number of exercises a week devoted to each course, etc.

ATTENDANCE

Regular attendance upon lectures and recitations is required of all students.

In any term, absences are counted from the first regular meeting of each class. In no case will a student be considered present at any class until he has been registered as a member of that class.

Any student whose absences from a class during any month equal the number of scheduled meetings of the class for one week is required to stand a special examination on that month's work within the first two weeks of the succeeding month at an hour to be announced by the instructor. In the case of those whose absences in a given month reach the number indicated above, and who fail to stand the examination provided for such absences, it is left to the discretion of the instructor to retain them in his class.

Students who are absent from a class during the months of December, January, or May as much as 25 per cent of the scheduled meetings of the class must stand an examination for these months before being entitled to any grade on the term examination. This special examination is to be held in connection with the regular term examinations or at some time during the examination period.

Students who are absent during any term as much as $33\frac{1}{3}$ per cent of the scheduled meetings of the class, except in case of prolonged sickness necessitating at least half the absences, may, at the discretion of the instructor, be debarred from the term examination.

Attendance at chapel is compulsory for all students in the University, except for members of the professional departments and for such others as are specially excused. Absence from chapel will subject the student to discipline by the Executive.

No student is allowed to absent himself from the University without written permission from the President or his representative. This permission may, at the discretion of the executive officer, be granted only upon the formal request of the parent or guardian.

EXAMINATIONS

Regular examinations on all subjects are held at the close of each quarter. Excuses from examinations are granted only in case of absolute necessity.

Freshmen, Sophomores, and Juniors who have received the grade 5 (see page 44) in any subject will be given one, and only one, opportunity to make good the deficiency by special examination. Examinations on a subject may be made good in the following September, according to the schedule given below. In case a student fails in the special examination, he must repeat the subject

the next succeeding quarter. If the unremoved condition be in an elective subject not offered for the succeeding quarter, the student must take another elective valued at the same number of hours.

Seniors who have received the grade 5 in any subject will be given but one opportunity to make good the deficiency by special examination, viz., during the regular examination period of the three lower classes in May.

Papers handed in at special examinations by students who have been officially excused from the regular examination will be graded. All others will be marked either "passed" or "failed." Students who hand in papers at regular examinations are considered to have relinquished any claim to grades on special examinations.

Students who absent themselves from regular examinations without having obtained an official excuse, and those who are present at the regular examinations, but do not hand in papers, are marked "absent." They are required to repeat the subject with the next lower class, or, in case of an elective not offered in the succeeding year, to take another elective valued at the same number of hours.

A student wishing a special examination in any subject must deposit an application in the office of the Registrar at least one week before the beginning of the period of examinations.

Each student is required to subscribe his name to the following pledge on every paper: "*I hereby certify that during this examination I have neither given nor received aid.*" No paper without the pledge will be read.

The order of examinations for the removal of conditions in September, 1919, will be as follows:

Wednesday, September 24

10 A. M.	Geology History	2:30 P. M.	Physics Greek
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Thursday, September 25

10 A. M.	Chemistry Philosophy	2:30 P. M.	English Education
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Friday, September 26

10 A. M.	Zoology Romance Languages	2:30 P. M.	German
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Saturday, September 27

10 A. M.	Mathematics Economics	2:30 P. M.	Latin Botany
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STANDING

Semi-annual reports of the standing of all students in all the studies of the previous term are sent to parents or guardians. The reports are based upon the following system of marking:

- Grade 1, 95-100 per cent.
- Grade 2, 90- 95 per cent.
- Grade 3, 80- 90 per cent.
- Grade 4, 70- 80 per cent.
- Grade 5, 60- 70 per cent.
- Grade 6, below 60 per cent.

Students must attain a grade of 4 to pass in any study. Grade 5 indicates that the student is conditioned, but may remove the deficiency by special examination, as explained on page 42. Students receiving grade 6 in any study must take such study again with the next lower class, or in case of an elective not offered in the succeeding year, must take another elective valued at the same number of hours.

A student who has failed on all the examinations of the year in any college study may not take a higher class in that department until he makes good his deficiency.

A student to be ranked as a Sophomore must have passed six courses; to be ranked as a Junior, sixteen courses; to be ranked as a Senior, twenty-six courses.

No Freshman who fails to pass at least four courses, and no Sophomore or Junior who fails to pass six courses, shall be readmitted to the University the following year except by a special vote of the Faculty or a delegated committee of the Faculty.

CERTIFICATES

A certificate is granted to a student who has completed with credit in any department except those of Mathematics, Chemistry, Physics, and Geology all work required for a degree, together with elective work in the same department. (For detailed statement of requirements, see under the several departments of instruction.)

GRADUATION

Each Senior will be officially informed by the Registrar in August of all deficiencies standing against him.

The number of orations in the contest for the Mangum Medal is limited to four. The candidates must be members of the Col-

lege or the School of Applied Science, and must announce their subjects to their respective Deans by February 1. The orations shall be delivered in private before a committee of the Faculty on May 1, who shall decide upon the relative merits of the orations. The four successful candidates are known as the Commencement Orators of the Senior Class.

ATHLETIC AND OTHER ORGANIZATIONS*

No student will be allowed to take part in athletic contests, concerts, debates, etc., entailing absence from the University whose parent or guardian objects to such participation.

A student who was in attendance upon the University during a previous quarter must have passed satisfactory examinations upon at least two courses of work before he will be allowed to represent the University in any athletic contest or in any other public capacity.

No student reported as deficient in a majority of his classes may participate in any athletic contest or otherwise publicly represent the University until the deficiency is made good.

No team or club will be allowed to be absent from the University for more than ten lecture days during the term.

The manager of each athletic team or musical club shall submit to the Athletic Committee or to the President a schedule of all engagements before positive arrangements are made.

FRATERNITIES

Undergraduate students may join fraternities after registration in their Sophomore year. Fraternity men are not allowed to pledge Freshmen to join fraternities.

*See the general catalog for complete statement of rules governing athletics.

STUDENT GOVERNMENT

The student body of the University is self-governing. The functions of this government are both disciplinary and constructive. These functions are exercised by the Student Council and the Greater Council, respectively.

The Student Council

L. H. HODGES, *Chairman*.

E. E. WHITE, *Secretary*.

B. B. LUPPERT

DONALD COBB

J. V. BAGGETT

J. S. WHITE

FRANK HERTY

V. S. BRYANT, JR.

The Student Council is composed of eight members, as follows: the presidents of the three upper academic classes, one representative from each of the professional schools, one representative elected from the student body at large, and one representative elected by the other seven members of the Council. The member elected by the Council must be chosen from among those who have served on the Council before. The President of the Senior Class is *ex officio* Chairman of the Council, and the President of the Junior Class, *ex officio* Secretary.

Student government, in so far as it is disciplinary, is based upon the honor system. No code of rules is laid down to direct a student what to do and what not to do. The only standards are those of morality and gentlemanly conduct. The student Council is the head of the honor system. It is the concrete expression of the moral University. Its members being elected of the students by the students, it is grounded upon, and gives expression to, student sentiment. The Council is not an organization of policemen, nor is it based upon a system of espionage. When any student is felt by his fellow students to be unworthy to remain in the University, the Council takes cognizance of this feeling. It examines the matter, finds the facts in the case, and decides upon the course to be pursued. If the student is found guilty of conduct unworthy of a University man, he is promptly required to withdraw from the University. Among the offenses demanding withdrawal may be mentioned drunkenness, cheating on examination, and gambling.

THE CAMPUS CABINET

L. H. HODGES, President.

J. E. DOWD, *Secretary*.**Members of the Cabinet**

L. H. HODGES

J. W. G. POWELL

J. E. DOWD

BOYD HARDEN

R. H. GRIFFITH

ADAM T. THORP

G. L. NYE

J. V. BAGGETT

W. M. YORK

T. E. RONDTHALER

The Campus Cabinet is an organization composed of representative students selected by the President of the Senior class. These representative students are chosen from the four academic classes, the Law, Medical, Pharmacy and Graduate Schools, and from the Young Men's Christian Association. The object of this organization is to study campus conditions and campus problems and to relate them to the "greater University." It attempts to work out all problems the solution of which would make life of the students more wholesome and more enjoyable. It is not an executive body, mainly, but a suggestive body. It takes up such questions as the social life of the students, the athletic situation as it concerns the entire student body, dormitory improvements, and many other things that it thinks will benefit the students. It is a flexible body and is always ready to discuss and aid any worthwhile matter that a student presents to it.

EXPENSES

Every effort is made to reduce to the lowest point the necessary expenses of an education at the University. The entire annual expenses need not exceed \$400 and they frequently may be reduced to \$300.

Tuition

College of Liberal Arts:

Tuition fee each quarter	\$ 20.00
*Matriculation fee each quarter	10.00

Total each quarter\$ 30.00

School of Applied Science:

Same as for the College.

School of Education:

Same as for the College.

School of Pharmacy:

Same as for the College.

School of Law:

Tuition fee each quarter	\$ 25.00
Matriculation fee each quarter	10.00

Total each quarter\$ 35.00

School of Medicine:

Tuition fee, including all fees (except damage fee) each quarter	\$ 50.00
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Fees

Students taking courses in the laboratories are charged a small fee for materials. The amount of each fee is indicated in connection with the description of the particular course.

Each student must keep on deposit with the Treasurer \$2 as security for damages. Wilful damage to University property is charged to the perpetrator, if known; otherwise it is charged to the general deposit for damages. Any balance is returned to the student at the end of the year.

*This fee includes the gymnasium fee, the library fee, the fee for attendance of the University physician and of the University nurse, and the fee for athletics.

Board

Excellent board is furnished at Swain Hall for \$17 a month. A few students can earn their board by waiting on the tables.

Board without room can be obtained in the town from \$16 to \$23 a month.

DORMITORY ACCOMMODATIONS

The University buildings contain rooms available for the accommodation of something over three hundred students. There is no charge for service in addition to the rent. All rooms are fitted with electric lights. Room rent ranges from 75 cents to \$6 a month for each occupant, the price depending upon the location of the room. All dormitories contain furnished rooms.

All the buildings of the University are heated by hot water according to the most improved methods. In the dormitories the charge for light and heat will be \$2 a month for each room.

PECUNIARY AID

FELLOWSHIPS AND SCHOLARSHIPS

THE LEDOUX FELLOWSHIP IN CHEMISTRY. (Established in 1911 by Dr. Albert R. Ledoux.) The holder is expected to devote himself to research in chemistry. This fellowship is endowed, and yields \$300 annually.

THE LIBRARY FELLOWSHIPS, two in number, established in 1907, yield each \$150 annually. The holders are expected to assist in the Library.

THE JULIAN S. CARR FELLOWSHIP, endowed in 1916 by General Julian S. Carr. A fellowship valued at about \$300 to be awarded at Commencement each year to a member of the rising Junior class or Senior class who has shown by the high scholastic quality of his work that he is worthy of help, and who, during his first years in college, has earned his way in whole or in part. The holder of this fellowship is selected by a faculty committee, and applications should be made before May 15.

THE CAMERON SCHOLARSHIPS. (Established in 1892.) The heirs of Paul Carrington Cameron founded in his memory ten scholarships of the value of \$60 each.

THE DIALECTIC AND PHILANTHROPIC LITERARY SOCIETIES' SCHOLARSHIPS. (Established in 1893.) The Dialectic and Philanthropic Literary Societies of the University founded two scholarships of the value of \$60 each, recipients of which shall give assistance in the Library.

THE MOORE SCHOLARSHIPS. (Established in 1881.) Bartholomew Figures Moore, of Raleigh, bequeathed \$5,000, the interest of which shall be devoted to paying the tuition of students.

THE MARY ANN SMITH SCHOLARSHIPS. (Established in 1891.) Miss Mary Ann Smith bequeathed \$37,000 for the foundation of scholarships, the number of scholarships to be determined by the amount of the income.

THE MARY RUFFIN SMITH SCHOLARSHIPS. (Established in 1885.) Miss Mary Ruffin Smith bequeathed to the University, in memory of her brother, Dr. Francis Jones Smith, a valuable tract

of land in Chatham County of 1,460 acres, known as Jones's Grove. The will provides that rents of the land, or the interest on the purchase money if sold, shall be used to pay the tuition of such poor students as the faculty shall appoint.

THE SPEIGHT SCHOLARSHIPS. (Established in 1892.) The late Mrs. Mary Shepard Speight bequeathed \$10,000 to the University. The income shall be used to pay the tuition of needy students; but if tuition is ever made free, the income shall be used toward paying the salaries of the professors.

THE WOOD SCHOLARSHIP. (Established in 1892.) Mrs. Mary Sprunt Wood, of Wilmington, has founded, in memory of her late husband, Dr. Thomas Fanning Wood, a scholarship of the value of \$60.

THE WEIL SCHOLARSHIP. (Established in 1898.) A fund established by Mr. Henry Weil, of Goldsboro, furnishes one scholarship of the value of \$60.

THE ARMFIELD SCHOLARSHIPS. (Established in 1901 and 1904.) These scholarships are founded by the generosity of Mr. Eugene M. Armfield, of the Class of 1888, High Point, N. C.

THE ALUMNI SCHOLARSHIPS. These scholarships have been established by the gifts of Alumni. A scholarship will be awarded for each \$1,000 given.

THE KENNETH MURCHISON SCHOLARSHIPS. (Established in 1904.) These scholarships have been founded by Mrs. Shirley Carter, of Baltimore, Md., and Mrs. James Sprunt, of Wilmington, N. C., in memory of their father. They are awarded by the founders.

THE R. H. LEWIS SCHOLARSHIPS. Four scholarships, endowed by the University Gymnasium Association and called The R. H. Lewis Scholarships, are assigned by the President, and are good for tuition in the Academic Department.

THE DONALD FAIRFAX RAY SCHOLARSHIP. (Established in 1919.) Mrs. N. W. Ray, of Fayetteville, N. C., has established this scholarship in memory of her son, Donald Fairfax Ray, a graduate of the University, who died while in the service of his country.

None of these scholarships is open to students in the professional Schools of Law, Medicine, and Pharmacy.

All applications for scholarships must be filed in the President's office on or before August 15, and must be in the regular form prescribed by the University. Blank forms are supplied on application to the President.

FREE TUITION

By an act of the Legislature in 1887, free tuition is given to candidates for the ministry, to the sons of ministers, to young men under bodily infirmity, to teachers, and to young men preparing to teach. In order to secure this free tuition, young men preparing to teach must agree to teach in North Carolina for at least two years after leaving the University. This enables the University to aid effectively the public school teachers of the State.

LOAN FUNDS

THE DEEMS FUND. (Established in 1879.) A fund of \$600 was established by Rev. Charles Force Deems, D.D., late pastor of the Church of the Strangers, New York City, formerly a professor in the University, in memory of his son, Lieut. Theodore Disosway Deems. In 1881 the gift was greatly enlarged through the munificence of Mr. William H. Vanderbilt by a gift of \$10,000 "as an addition to the Deems fund, to be loaned to indigent students of the University."

THE MARTIN FUND. This fund has been established by the bequest of Mr. Thomas D. Martin, of Raleigh. Only the interest of the fund can be used for loans. It became available during the session of 1907-1908.

All applications for loans must be filed in the President's office on or before August 15.

Applications for loans will not be considered unless accompanied by testimony from responsible persons as to poverty and merit. The funds are limited in amount and are loaned only on the security of two approved signatures and at the legal rate of interest.

SELF HELP

It is confidently believed that no institution offers wider opportunities for self-help to meritorious students of slender means. The desire is that no worthy boy, however poor, shall ever be turned away for lack of means. To such the University and town offer unusual opportunities for support. Many students are

now working their way through college by every form of honorable labor. A number are here as a result of money earned or borrowed. A few students are selected by the authorities as waiters at Swain Hall. Otherwise, all opportunities available in the University and town must be secured by the personal efforts of the individual, or with the assistance of the Faculty Committee on Self-Help. They are not assigned by the President.

MEDALS AND PRIZES

THE MANGUM MEDAL IN ORATORY. (Established 1878.) A gold medal founded by the Misses Mangum, late of Orange County, in memory of their father, Willie Person Mangum, is continued by his granddaughters, Mrs. Julian A. Turner, Mrs. Stephen B. Weeks, and Miss Preston Leach, and awarded to that member of the Senior Class who shall deliver the best oration at Commencement.

THE BINGHAM PRIZE IN DEBATE. (Established in 1899.) This prize is offered by Mr. R. W. Bingham in memory of his great-grandfather, grandfather, father, and brother. It is given annually for excellence in debate. The contestants are representatives of the Literary Societies, and the contest is held on Tuesday evening of Commencement week.

THE KERR PRIZE IN GEOLOGY AND MINERALOGY. (Established in 1889.) A prize of \$50 is offered annually by Mr. William H. Kerr in memory of his father, Professor Washington Caruthers Kerr, to any undergraduate or graduate student for the best thesis containing original work in the geology or mineralogy of North Carolina.

THE EBEN ALEXANDER PRIZE IN GREEK. (Established in 1887.) A prize of \$10 is offered annually to that member of the Sophomore Class who shall present the best rendering into English of selected passages of Greek not previously read.

THE WORTH PRIZE IN PHILOSOPHY. (Established in 1883.) Mr. Charles Williams Worth, in memory of his father, David Easton Worth, of the Class of 1853, will print the best thesis submitted by a student in Philosophy 4.

THE EARLY ENGLISH TEXT SOCIETY PRIZE. (Established in 1886.) A special prize is offered annually by the Early English Text Society of London for advanced work in Anglo-Saxon and Middle English.

THE BRYAN PRIZE. (Established in 1903.) A prize will be given annually by Mr. William Jennings Bryan for the best thesis in Political Science.

THE HUNTER LEE HARRIS MEMORIAL. (Established in 1903.) Dr. Charles Wyche, of St. Louis, offers annually, in memory of Hunter Lee Harris, of the Class of 1893, a gold medal for the best original story by any student in the University.

THE WILLIAM CAIN PRIZE IN MATHEMATICS. (Established in 1908.) A gold medal is offered annually by Professor William Cain to that student who shall take the highest rank in Mathematics 11-12. No student will be recommended for the prize unless he attain to grade 2.

THE PRESTON CUP, given by the Hon. E. R. Preston in memory of his brother, Ben Smith Preston, will be awarded annually to the undergraduate student who during the months September to April has done the best work of a journalistic nature.

Certain prizes are offered also in the Professional Schools of Law, Medicine, and Pharmacy. For these, see under the several schools.

PUBLIC LECTURES

THE JOHN CALVIN MACNAIR LECTURES

The lecture fund established by the will of John Calvin MacNair of the Class of 1849 became available in 1906. The honorarium for the lectures amounts to \$500 annually and the remainder of the interest from the fund provides for the suitable publication of the lectures. Under the will the objects of the lectures "shall be to show the mutual bearing of science and religion upon each other and to prove the existence of attributes (as far as may be) of God from nature."

THE WEIL LECTURES

During the years 1914-1915 an unendowed lectureship on American Citizenship was established by the University. The first incumbent was ex-President William Howard Taft, who lectured on "The Presidency: Powers, Duties, Obligations and Responsibilities." Since that time this foundation, named the Weil Lectures on American Citizenship, has been permanently established through the generosity of the families of Mr. Sol Weil and Mr. Henry Weil, of Goldsboro, N. C.

THE UNIVERSITY LECTURES

Under the auspices of the Faculty Committee on Public Lectures a series of lectures is delivered annually on various topics of interest by men of national and international renown.

THE SOUTHERN EXCHANGE LECTURESHIP

In 1914 an exchange lectureship was established by Vanderbilt University, the University of Virginia, the University of South Carolina and the University of North Carolina. Under the terms of this lectureship each university will send a lecturer to and will be visited by a lecturer from one of the other universities participating in the lecture foundation. The purposes of this lectureship are: to promote scholarship, to present in concrete form recent advances in some special branch of learning, and to bring the institutions concerned into closer relationship through exchange of ideas in regard to all vital problems affecting a modern university.

UNIVERSITY SERMONS

Under the auspices of a Faculty Committee University Sermons are delivered monthly throughout the year in the College Chapel by prominent clergymen.

UNIVERSITY ORGANIZATIONS

THE DIALECTIC AND PHILANTHROPIC LITERARY SOCIETIES

The Dialectic and Philanthropic Societies offer facilities for practice in debate, oratory, declamation and essay writing. Meetings are held by each society every Saturday evening during the college year, admission being confined to members. Public contests in debating between the two societies are conducted twice a year and in addition to these, there is a system of intercollegiate debates.

By immemorial custom students from the eastern half of the State usually join the Philanthropic Society, while those from the western half join the Dialectic Society.

THE ELISHA MITCHELL SCIENTIFIC SOCIETY

The Elisha Mitchell Scientific Society holds monthly meetings during the college year for the discussion of scientific subjects. A journal, which is the official organ of the North Carolina Academy of Science, is issued quarterly. The object of the society is to encourage specific research and to record such matters as pertain to the natural history of the State.

THE NORTH CAROLINA HISTORICAL SOCIETY

The North Carolina Historical Society was founded in 1833 by Governor David L. Swain. The purpose of the society is to collect, classify and publish material illustrative of the State. Meetings are held monthly in the History lecture room, at which papers, based on original research, are read and discussed.

THE PHILOLOGICAL CLUB

The Philological Club holds monthly meetings during the college year. The object of the club is to stimulate original investigation in philology and to afford an opportunity for the interchange of views on subjects relating to such work. Studies in Philology, a quarterly journal founded by the club, is now in its sixteenth year.

DER DEUTSCHE VEREIN

The Verein holds weekly meetings throughout the year at which the German language only is employed. An effort is made to provide students of German with an opportunity to perfect their pronunciation and to improve their control of the spoken language.

LE CERCLE FRANCAIS

Le Cercle Francais holds weekly meetings at which topics of general interest pertaining to French literature and French life, manners, and customs are discussed. The French language is employed exclusively. It is the aim of the club to stimulate interest in the French language, to provide its members with an opportunity to hear idiomatic French spoken, and use the language with more facility.

MUSICAL ASSOCIATION

The aim of the association is to foster the love of music and to afford opportunity of instruction to those interested in music. The organization consists of an orchestra, a brass band, mandolin and glee club, which are representative of the musical talent of the University.

THE NORTH CAROLINA CLUB

The North Carolina Club was organized September 25, 1914, in Gerrard Hall. Its purpose is to review, interpret, and discuss the economic, social, and civic problems of the State. These problems are being explored, county by county, by the County Clubs of the University student body. Every other Monday night throughout the college year the results of the county club studies come before the North Carolina Club for discussion and debate.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

University of North Carolina Branch

The aim of the Branch is to stimulate interest in modern problems in the various fields of electrical engineering, to provide a means for students to discuss in public various questions of a technical nature and to give them an opportunity for practice in speaking on their feet. Fortnightly meetings are held at which original papers are presented and abstracts of papers presented before the regular Institute meetings are discussed.

YOUNG MEN'S CHRISTIAN ASSOCIATION

The University Young Men's Christian Association, with its centrally located house as a meeting place and home for the students: with its work for new students; with its social receptions; with its annually published handbook and directory; with its lyceum course; with its support of eight Sunday Schools; with its self-help department; with its weekly religious meetings; with its ministerial and missionary clubs; with its large enrollment of men in Bible and mission study; is an organized agency for usefulness and an aggressive force for morality in the University life.

Part Three

THE COLLEGE OF LIBERAL ARTS

THE SCHOOL OF APPLIED SCIENCE

THE SCHOOL OF EDUCATION

THE GRADUATE SCHOOL

THE SCHOOL OF LAW

THE SCHOOL OF MEDICINE

THE SCHOOL OF PHARMACY

THE SUMMER SCHOOL FOR TEACHERS

THE BUREAU OF EXTENSION

THE COLLEGE OF LIBERAL ARTS

ADMISSION

Admission Into the Freshman Class

Candidates for admission into the Freshman Class are received by certificate from accredited schools or by examination.

ENTRANCE BY CERTIFICATE. Students who present certificates of work accomplished at preparatory schools and colleges may be admitted without examination, provided the certificates are approved. The right to examine, however, is reserved, when such a course is deemed necessary. Certificates must be made out on the printed forms furnished on application to the Registrar, and should be sent in as early as possible in the summer vacation; the uniform entrance certificates of the Association of Colleges and Preparatory Schools of the Southern States will also be accepted. Candidates must present themselves in person before the Committee on Entrance Certificates in the Alumni Building during the period of registration (*September 30, October 1, 1919.*)

ENTRANCE BY EXAMINATION. Entrance examinations are held in September. Arrangements have been made with certain schools in the State whereby examinations for admission may be held in May, also, at the schools. The University will accept the uniform entrance examination papers of the Association of Colleges and Preparatory Schools of the Southern States, provided such papers are properly vouched for and sent sealed to the University for grading. The University will accept also the certificates of the College Entrance Examination Board. Candidates for admission by examination must report at 9 a. m., *Tuesday, September 30, 1919*, to the Registrar, who will appoint time and place for examination.

Subjects Accepted for Entrance

The complete list of subjects accepted for entrance is as follows:*

English, <i>a, b, c,</i>	3.	units
History <i>a, b, c,</i>	3.	units
Mathematics <i>a, b, c, d,</i>	4.	units
Greek <i>a, b, c,</i>	3.	units
Latin <i>a, b, c, d, e,</i>	4.7	units
French, <i>a, b,</i>	3.	units

*For specific requirements in each of the subjects in this list, see pages 63-69.

German <i>a, b</i> ,	3.	units
Spanish <i>a</i> ,	2.	units
Botany	1.	unit
Chemistry	1.	unit
Physics	1.	unit
Zoology	1.	unit
Drawing	1.	unit
General Science	1.	unit
Civics5	unit
Physiography5	unit
Physiology5	unit

Vocational Subjects:†

Commercial Geography5	unit
General Agriculture	1.	unit
Bookkeeping	1.	unit
Commercial Arithmetic	1.	unit
Stenography and Typewriting	1.	unit
Manual Training	2.	units

It will be noticed that each subject has a valuation by units. A unit means a definite amount of a subject satisfactorily completed in a reasonable length of time. For example, one unit in History means the satisfactory completion of a standard text-book in United States History in a period of study continuing through an entire High School session; one-half unit in Civics means the completion of a standard text in Civics in about one-half a session; the fifteen units mentioned below correspond to the four years of work in a good high school.

Unconditioned entrance to the undergraduate departments of the University requires a total of 15 units selected from the list above.

At the discretion of the Committee on Entrance Certificates, candidates may be admitted with conditions provided the total number of units offered does not fall below the minimum of 13 units, and *provided the conditions are of such nature that, in the judgment of the Committee, they may be removed according to the regulations given in the next paragraph.* The Committee has the discretionary power to admit certain candidates whose credits fall below 13 units, if, in the opinion of the Committee, the maturity of the candidate, who must be at least twenty-one years of age, justifies such action. Candidates thus admitted will be classed as special students.

†Not more than 2 units from this list may be presented for admission to the College of Liberal Arts.

Entrance conditions in any subject must be made up by September of the following year. A student who fails to comply with this regulation will not be allowed to register for any course in his Sophomore year.

Prescribed Subjects

English <i>a, b, c,</i>	3.	units
History <i>a,</i>	1.	unit
Mathematics <i>a, b, c,</i>	2.5	units
Select Two { Greek 2 units Latin 3.7 units German 2 units French 2 units Spanish 2 units }	4.	or 5.7 units
Electives	4.5	or 2.8 units

The requirements in each of the subjects accepted for entrance are as follows:

ENGLISH: (1915-1919) (*a*) Grammar and Rhetoric. 1. unit
 (*b*) Classics for Reading 1. unit
 Two from each of the following groups:

GROUP I.—CLASSICS IN TRANSLATION.

The Old Testament, comprising at least the chief narrative episodes in *Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel*, together with the books of *Ruth* and *Esther*; Homer's *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; Homer's *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Virgil's *Æneid*. The *Odyssey, Iliad*, and *Æneid* should be read in English translations of recognized literary excellence. FOR ANY SELECTION FROM THIS GROUP A SELECTION FROM ANY OTHER GROUP MAY BE SUBSTITUTED.

GROUP II.—SHAKSPERE.

Shakspeare's *Midsummer-Night's Dream; Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard II; Richard III; Henry V; Coriolanus; Julius Cæsar; Macbeth; Hamlet*. N. B.—The last three only, if not chosen for study.

GROUP III.—PROSE FICTION.

Malory's *Morte d'Arthur* (about 100 pages); Bunyan's *Pilgrim's Progress*, Part I; Swift's *Gulliver's Travels* (*Voyages to Lilliput and to Brobdignag*); Defoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar*

of *Wakefield*; Frances Burney's *Evelina*; Scott's Novels, any one; Jane Austen's Novels, any one; either Maria Edgeworth's *Castle Rackrent* or *The Absentee*; Dicken's Novels, any one; Thackeray's Novels, any one; George Eliot's Novels, any one; Mrs. Gaskell's *Cranford*; either Kingsley's *Westward Ho!* or *Hereward the Wake*; Reade's *The Cloister and the Hearth*; Blackmore's *Lorna Doone*; Hughes's *Tom Brown's Schooldays*; either Stevenson's *Treasure Island*, or *Kidnapped*, or *The Master of Ballantrae*; Cooper's Novels, any one; Poe's *Selected Tales*; either Hawthorne's *The House of the Seven Gables*, or *Twice Told Tales*, or *Mosses from an Old Manse*; A collection of short stories by various standard writers.

GROUP IV.—ESSAYS, BIOGRAPHY, ETC.

Either the Sir Roger de Coverly Papers or Selections from the *Tatler* and *The Spectator* (about 200 pages); Boswell's Selections from *The Life of Johnson* (about 200 pages); Franklin's *Autobiography*; either Irving's Selections from *The Sketch Book* (about 200 pages) or *The Life of Goldsmith*; Southey's *Life of Nelson*; Lamb's Selections from *The Essays of Elia* (about 100 pages); Lockhart's Selections from *The Life of Scott* (about 200 pages); Thackeray's Lectures on Swift, Addison, and Steele in *The English Humorists*; Macaulay, one of the following essays: *Lord Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederic the Great* or *Madame d'Arblay*; Trevelyan's Selections from *Life of Macaulay* (about 200 pages); either Ruskin's *Sesame and Lilies* or Selections (about 150 pages); Dana's *Two Years Before the Mast*; Lincoln's Selections, including at least the two *inaugurals*, the *Speeches in Independence Hall* and at *Gettysburg*, the *Last Public Address*, and *Letter to Horace Greeley*, together with a brief memoir or estimate of Lincoln; Parkman's *The Oregon Trail*; Thoreau's *Walden*; Lowell's *Selected Essays* (about 150 pages); Holmes's *The Autocrat of the Breakfast Table*; Stevenson's *Inland Voyage* and *Travels with a Donkey*; Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*.

GROUP V.—POETRY.

Falgrave's *Golden Treasury* (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelly (if not chosen for study under B); Goldsmith's *The Traveler*, and *The Deserted Village*; Pope's *The Rape of the Lock*; a collection of English and Scottish ballads, as, for example, some Robin Hood ballads, *The Battle of Otterburn*; *King Estmere*, *Young Beichan*, *Bewick*, and *Grahame*, *Sir Patrick*

Spens, and a selection from later ballads; Coleridge's *The Rime of the Ancient Mariner*, *Christobel*, and *Kubla Khan*; Byron's *Childe Harold*, Canto III or IV, and *The Prisoner of Chillon*; Scott's *The Lady of the Lake* or *Marmion*; Macaulay's *Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, and *Ivry*; Tennyson's *The Princess* or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*, *The Italian in England*, *The Patriot*, *The Pied Piper*, "*De Gustibus—*" and *Instans Tyrannus*; Arnold's *Sohrab and Rustum*, and *The Forsaken Merman*; selections from American poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

(c) Classics for Study 1. unit

One selection from each of the following groups:

GROUP I.—DRAMA.

Julius Cæsar; *Macbeth*; *Hamlet*.

GROUP II.—POETRY.

Milton's *L'Allegro*, *Il Penseroso*, and either *Comus* or *Lycidas*; Tennyson's *The Coming of Arthur*, *The Holy Grail*, and *The Passing of Arthur*; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury* (First Series).

GROUP III.—ORATORY.

Burke's speech on *Conciliation with America*; Macaulay's speech on *Copyright*, and Lincoln's speech at Cooper Union; Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*.

GROUP IV.—ESSAYS.

Carlyle's essay on *Burns*, with a selection from Burns's Poems; Macaulay's life of *Johnson*; Emerson's essay on *Manners*.

HISTORY: (a) The history of the United States, as outlined in the best text-books for high schools..... 1. unit
 (b) The history of Greece and Rome as outlined in the best text books for high schools..... 1. unit
 (c) The history of England as outlined in the best text-books for high schools..... 1. unit
 (d) Mediæval History 1. unit

- MATHEMATICS:** (a) Elementary Algebra 1. unit
A high school algebra to quadratic equations.
(b) Advanced Algebra5 or 1. unit
Review of elementary algebra and quadratic equations, binomial theorem, and progressions.
(c) The whole of Plane Geometry..... 1. unit
(d) The whole of Solid Geometry..... .5 unit
(e) Trigonometry5 unit
Plane trigonometry and spherical trigonometry through right triangles.
- GREEK:** (a) Grammar and Composition 1. unit
Acquaintance with the more usual forms and constructions; simple narrative in English, based upon Xenophon's *Anabasis*, to be translated into Greek.
(b) Xenophon 1. unit
The first four books of the *Anabasis*.
(c) Homer 1. unit
The first three books of the *Iliad* (omitting II, 494—end), with study of Homeric forms, constructions, and prosody.
- LATIN:** (a) Grammar and Composition..... 1. unit
Forms, syntax, and prosody; simple narrative in English, based upon the prose read, to be translated into Latin.
(b) Cæsar 1. unit
The first four books of the *Gallie War*.
(c) Cicero7 unit
The four orations against Catiline.
(d) Vergil 1. unit
The first six books of the *Æneid*, study of hexameter verse.
(e) Cornelius Nepos 1. unit
The first fifteen lives.
- FRENCH:** (a) Elementary 2. units
The forms and uses of the various parts of speech, including irregular verbs; translation of 250 or more pages of easy prose into idiomatic English; translation of simple English sentences into French; pronunciation.
(b) Intermediate 1. unit
Translation of 400 or more pages of French of ordinary difficulty.

GERMAN: (a) Elementary 2. units

Inflection, including the most common strong verbs; the ordinary laws of German syntax; translation of 200 or more pages of easy German into idiomatic English; translation of simple English sentences, based upon passages read, into German.

(b) Intermediate 1. unit

Translation of 400 or more pages of German of ordinary difficulty.

SPANISH: (a) Elementary 2. units

Inflection, including the most common irregular verbs; ordinary laws of syntax; translation of 250 pages or more of easy Spanish into idiomatic English; translation of simple English sentences, based upon the passages read, into Spanish.

GENERAL SCIENCE:*5 or 1. unit

A course such as is contained in Caldwell and Eikenberry's General Science; laboratory work. Holden's Real Things in nature will not be credited for this work.

BOTANY:*5 or 1. unit

A course such as is contained in any standard text-book; laboratory work.

CHEMISTRY:*5 or 1. unit

A course such as is contained in any standard text-book; laboratory work.

PHYSICS:*5 or 1. unit

A course such as is contained in Millikan and Gale's Physics or Carhart and Chute's High School Physics; laboratory work such as is outlined in Millikan and Gale's Physics.

ZOOLOGY:*5 or 1. unit

A year's course such as contained in any standard text-book; laboratory work.

PHYSIOGRAPHY:5 unit

A course such as is contained in any standard text-book.

*A credit of one unit is given only when the course is accompanied by laboratory work, a suitable record of which is kept in a notebook. In case the laboratory work is omitted only .5 unit will be allowed.

PHYSIOLOGY: 1. unit

A course such as is contained in any standard text-book.

CIVICS:5 unit

A course such as is contained in any standard text-book.

DRAWING: 1. unit

A year's work, including simple geometrical plane and solid figures, simple pieces of machinery, elementary rules of perspective, light and shade, as applied in freehand sketching.

Vocational Subjects

The University will accept, as elective units for entrance, work in the vocational subjects outlined below, to the value of two units for entrance to the College of Liberal Arts, and three units for entrance to the School of Applied Science. Credit will be allowed for these subjects only after special investigation as to the merit of the work done. The content of these courses is essentially the same as that adopted by the Association of Colleges and Preparatory Schools of the Southern States.

GENERAL AGRICULTURE: 1. unit

A one year course consisting of three recitation periods and two double laboratory periods a week, extending through one school year. In case the laboratory work is omitted only .5 unit will be allowed.

BOOKKEEPING: 1. unit

A one year course covering the simple forms in single and double entry bookkeeping.

COMMERCIAL ARITHMETIC: 1. unit

A one year course such as is contained in any standard text-book of commercial or business arithmetic.

COMMERCIAL GEOGRAPHY:5 unit

A half-year course such as is contained in any standard text-book.

STENOGRAPHY AND TYPEWRITING: 1. unit

Credit will be allowed for work in these two subjects only if presented together. Neither subject will be credited separately.

MANUAL TRAINING: 2. units

A total of not more than two units may be presented from the list of courses in shop work recommended by the Committee on Manual Training of the Southern Commission on Accredited Schools. The time required for each unit is to be not less than 240 sixty-minute hours.

Admission to Advanced Standing

A candidate for advanced standing may be admitted to the Sophomore, Junior, or Senior Class, with or without complete examination. He is subject not only to the examinations required of candidates for admission into the Freshman Class, but to special examinations both in all the required studies already pursued by the class which he desires to enter and in as many elective studies as would have been required of him as a member of that class. When satisfied with the apparent fitness of the candidate, the examining committee may, in spite of his deficiencies in some studies, admit him to an advanced class; but a candidate so admitted is not recommended for the degree until the deficiencies are made good. The examining committee may accept, also, with proper restrictions, the official report of work satisfactorily completed at a college or university of good standing in place of an examination upon such previous work. All credits allowed by this committee stand in suspense until the candidate shall have spent one term in residence. If his work during this term is unsatisfactory, the credits may be canceled.

A candidate for advanced standing should present himself for examination on the same day and at the same hours as candidates for admission into the Freshman Class.

CURRICULUM

The course leading to the degree of Bachelor of Arts, is designed to provide a general, well-rounded, liberal education.

In order to be recommended for the degree a student must pass satisfactory examinations in thirty-six whole courses. He must, in addition, pass the required general courses in the Freshman and Sophomore years.

A whole course consists of five (six in the case of certain laboratory courses) class periods a week for one quarter. A half course consists of three class periods a week for one quarter. Two half courses are equivalent to one whole course. Each class period presupposes two hours of preparation or the equivalent in laboratory work.

In the first two years the student pursues a more or less definite curriculum in the following subjects:

English	three courses
Foreign Languages	three courses in each of 2 languages
History	two courses
Mathematics	two courses
Science	two courses

Beginning with the Junior year the work is on an elective basis, providing what is deemed a proper amount of concentration in study and, at the same time, a certain distribution of subjects.

Students who expect at some time to carry out investigation in any science or scientific profession, such as medicine or engineering, are earnestly recommended to enter upon their Senior year with a reading knowledge of German and French. Class work in these subjects should have included at least four courses in German and two in French.

Freshman Year

	English 1	1 quarter
	Mathematics 1-2	2 quarters
	History 1-2	2 quarters
Select two	Greek 3-4	2 quarters
	Latin 1-2	2 quarters
	French 3-4	2 quarters
	German 3-4	2 quarters
	Spanish 3-4	2 quarters
	General Course 1-2-3	3 quarters (1 hour)

By postponement of any one of these courses except English until Sophomore year, one course in Science (Botany 1-2, Chemistry 1-2, Zoology 1-2) may be taken in Freshman year.

Not more than three courses in addition to the general course may be taken in any one term except by special permission of the Committee on Courses.

Sophomore Year

	English 3-4	2 quarters
Select one	Botany 1-2	2 quarters
	Chemistry 1-2	2 quarters
	Physics 1-2	2 quarters
	Zoology 1-2	2 quarters
Select two	Greek 5	1 quarter
	Latin 3	1 quarter
	French 5	1 quarter
	German 21*	1 quarter
	Spanish 5	1 quarter
	General Course 4-5-6	3 quarters (1 hour)
	Elective	3 quarters

If a course in Science be taken in Freshman year, the Freshman course then postponed must be taken in place of the course in Science required of Sophomores.

Not more than three courses in addition to the general course may be taken in any one quarter except by special permission of the Committee on Courses.

SOPHOMORE ELECTIVES: Botany 1, 4; Chemistry 1-2; Economics 1-2; English 5, 7, 9, 14, 15; Geology 1, 2; German 3-4, 21-22, 23, 25-26; History 3-4, 5-6, 9-10; Latin 3, 4, 5, 10; Mathematics 3, 4, 9; Psychology 1; Physics 1, 2; French 3-4, 5, 6; Spanish 3-4; Zoology 1.

SYSTEM OF ELECTIVES

For the purpose of providing for the required concentration and distribution of electives in the Junior and Senior year, the various departments of the College are grouped under three general divisions as follows:

DIVISION I. *Language and Literature.*

Department of English.

Department of German.

Department of Greek.

Department of Latin.

Department of Romance Languages.

*German 23 or 25 may be substituted.

DIVISION II. *Philosophy, Political and Social Sciences.*

- Department of Economics.
- Department of Rural Economics and Sociology.
- Department of Education.
- Department of History.
- Department of Philosophy.

DIVISION III. *Mathematics, Natural Sciences.*

- Department of Botany.
- Department of Chemistry.
- Department of Electrical Engineering.
- Department of Geology.
- Department of Mathematics.
- Department of Physics.
- Department of Zoology.

Junior Year

Not later than May 15 of the Sophomore year each student shall hand in to the Registrar a list of electives for Junior year, specifying the department chosen for concentrated study and the particular courses in this and other departments. This list must have the written approval of the head of the chosen department before it will be accepted by the Registrar.

A Junior shall pursue elective studies amounting to nine courses, chosen according to the following regulations:

Each student is required to elect, in each quarter, either three whole courses or two whole courses and two half courses. A student will be permitted to take not more than three whole courses and one half course in any one quarter, and in no case will he be permitted to pursue more than four studies at one time.

One department must be selected for concentrated study from one of the three general divisions. Not less than three courses nor more than five courses may be elected in this department. The courses and the number of hours are to be decided upon only after consultation with the head of the department. It lies within the discretion of the head of the department whether the five courses shall be prescribed in his own department, or any part of them in allied departments. The Sophomore elective, completed the previous year, may be counted by the head of the department as one of the courses necessary for the minimum of three courses; but in that case an additional elective (chosen from any department) must be taken to complete the general requirement of nine courses.

The remaining courses (four to six) are free electives, subject only to the restriction that at least one course must be chosen from

a department in each of the other general divisions. One of these two courses should be selected with a view to a continuance of the same subject in Senior year (see Senior requirements).

The remaining hours, if any, shall be free electives in any subject open to Juniors.

Senior Year

Not later than May 15 of the Junior year each student shall hand in to the Registrar a list of electives for Senior year, specifying the department for concentrated study and the particular courses in this and other departments. This list must have the written approval of the head of the chosen department before it will be accepted by the Registrar.

A Senior shall pursue elective studies amounting to nine courses, chosen according to the following regulations:

Each student is required to elect, in each quarter, either three whole courses or two whole courses and two half courses. A student will be permitted to take not more than three whole courses and one half course in any one quarter, and in no case will he be permitted to pursue more than four studies at one time.

A Senior shall continue in the department of concentrated study begun in Junior year. Not less than three courses nor more than five courses may be elected in this department. The courses and the number of hours are to be decided upon only after consultation with the head of the department. It lies within the discretion of the head of the department whether the five courses shall be prescribed in his own department, or any part of them in allied departments.

The remaining courses (four to six) are free electives, except that at least two courses must be chosen from one of the other general divisions and in a department in which a course was elected in Junior year.

DEGREES WITH DISTINCTION

Honors of two grades, *Honors* and *Highest Honors*, will be awarded at Commencement to those candidates for the degree of Bachelor of Arts who have done distinguished work in a group of related subjects. Every candidate for Honors must register before October 15 of his Junior year with the Committee on Degrees with Distinction. He shall file a statement, properly approved, of the courses which he proposes to elect, and these electives shall be such as to show a unified plan and to provide for a field of concentrated study involving, as a rule, two departments within the division in which his major work lies. In connection with the regular courses, candidates are expected to do, in term-time and in

vacations, a considerable amount of additional reading, or such other supplementary work as may be prescribed by the department. In every case such additional work must be closely related to the general plan of study adopted by the candidate. Students will have the guidance and assistance of special instructors, and small groups will be formed for the discussion of the reading and of the courses. This tutorial assistance will be entirely independent of the conduct of the courses, the object being to stimulate interest in reading not required as a part of the regular class-work for its culture value rather than for direct preparation for examinations.

Besides the careful organization of the plan of study and the conferences, a thesis and a final oral examination are required. The thesis need not necessarily be a contribution to knowledge, but is designed to show the ability of the student to use his knowledge with intelligence and to interpret facts and his personal reaction upon the material studied in the courses or derived from the supplementary reading. The examination will test the candidate's knowledge of the whole field of concentrated study, and will also test his proficiency in a special topic within the general field. The aim of the entire plan of study is thus to secure, as far as possible, a conception of a field of learning as a unity; to prevent, through the various measures named above, undue emphasis on the separate courses as independent units; and to lay the foundation for right method through concentrated study in some part of the field.

The administration of the Honors courses is vested in a Committee on Degrees with Distinction which consists of three representatives from each of the three divisional groups into which the Faculty of the College of Liberal Arts is divided. At present Honors are offered in the Division of Language and Literature on the following terms:

Requirements for Honors in Language and Literature

1. A reading knowledge of one language besides English.
2. Six courses chosen from those open to Juniors, Seniors, and Graduates. Of these, four are to be in one department of Language and literature, the other two may be (*a*) in another literature, or (*b*) in history, provided the courses are closely correlated with work in the major subject. But other combinations may be made, provided they show a definite plan.
3. In every case the major and minor groups constituting the six courses must show a definite relationship: *e. g.*, the study of a period, such as Romanticism in France, Germany, and England, this study including history as well as literature; or the study

of a type, such as tragedy, in at least two literatures; or the study of the influence of some writer, for example, Plato, Vergil, Dante, Shakspeare, Goethe, on some literature other than his own. Other means of securing correlation may also be approved.

4. The principle of correlation is further carried out through (a) the provision for lecture courses in comparative literature; (b) the fortnightly conferences, at which books and reading in connection with the entire scheme of study are discussed; (c) the provision for an extensive course of reading, to be done in residence or during vacations, such reading to be ordinarily independent of prescriptions for courses and designed to give a thorough grounding in the field of learning elected for the major subject; (d) the special seminars, at least one each year, through which provision is made for the intensive study of some subject during a limited period under the guidance of a scholar from the faculty of some other university.

5. Acquaintance with the following subjects is to be gained within or outside courses regularly elected: (a) the history of the literature chosen for the major subject, including the principal masterpieces illustrating its development; (b) some acquaintance with the political and social history of the nation whose literature is so elected; (c) some acquaintance with the history and philology of the language. The extent of the candidate's knowledge of these topics, as well as of the field or topic chosen for intensive study, will be tested by an examination to be held near the end of the Senior year.

6. An essay of some length is to be written upon some topic belonging to the field chosen for intensive study. This essay must show (a) investigation and mastery of facts; (b) power of interpretation; (c) excellence in composition and style.

7. In estimating the value of the candidate's work due regard will be paid to the grades attained by him in his regular college courses, but the matter of grades is distinctly subsidiary to other considerations, such as the extent and quality of his reading, the maturity of his thought, and his ability to use his knowledge effectively.

SCHOOL OF APPLIED SCIENCE

REQUIREMENTS FOR ADMISSION

Candidates for admission to the School of Applied Science must present 15 units for unconditioned entrance. A complete list of these units and the requirements in each subject will be found on pages 63-69.

The specific requirements are as follows:

English <i>a, b, c</i> ,	3. units
History <i>a</i> ,	1. unit
Mathematics <i>a, b, c, d</i> ,	3. units
French <i>a</i> or German <i>a</i> or Spanish <i>a</i>	2. units
Science	1. unit
*Elective	4. units

At least 13 units must be offered at entrance.

COURSES LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

In order to be recommended for the degree of Bachelor of Science, the student must have passed satisfactory examinations in all the studies required in one of the following courses outlined in this department, I, II, III, IV, and V. Each course combines instruction in certain sciences and their application to the arts, with certain other general studies deemed essential to a liberal education. These courses are designed to furnish the fundamental instruction and to prepare students to pursue the technical professions to which they lead. The courses leading to the degree are five in number.

- I. Bachelor of Science in Chemistry.
- II. Bachelor of Science in Electrical Engineering.
- III. Bachelor of Science in Civil and Highway Engineering.
- IV. Bachelor of Science in Medicine.
- V. Bachelor of Science in Geology.

*Not more than 3 units may be presented from the list of vocational subjects on page 43.

I. BACHELOR OF SCIENCE IN CHEMISTRY*Fall Quarter:*

FRESHMAN YEAR

Chemistry 1, General Descriptive Chemistry.
Mathematics 2, Plane Trigonometry.
German 1, Composition and Literature.
Drawing 1, Mechanical Drawing. (Half Course.)

Winter Quarter:

Chemistry 2, General Descriptive Chemistry.
Mathematics 1, Algebra.
German 2, Composition and Literature.
Drawing 2, Mechanical Drawing. (Half Course.)

Spring Quarter:

Chemistry 31, Qualitative Analysis.
Mathematics 3, Analytical Geometry.
English 1, Composition.

Fall Quarter:

SOPHOMORE YEAR

Chemistry 41, Quantitative Analysis.
Mathematics 4, Calculus.
French 1, Composition and Literature.
English 11, Technical Composition.

Winter Quarter:

Chemistry 42, Quantitative Analysis.
English 12, English and American Literature.
Physics 1, Mechanics, Sound and Heat.
French 2, Composition and Literature.

Spring Quarter:

Chemistry 61, Organic Chemistry.
Chemistry 8, Chemical Equations.
Chemistry 47, Technical Analysis.
Physics 2, Light, Electricity and Magnetism.

Fall Quarter:

JUNIOR YEAR

Chemistry 62, Organic Chemistry.
Chemistry 45, Quantitative Analysis.
E. E. 1, Essentials of Electrical Engineering.
Economics 1, General Course.

Winter Quarter:

Chemistry 81, Physical Chemistry.
Chemistry 46, Quantitative Analysis.
E. E. 2, Essentials of Electrical Engineering.
Economics 2, General Course.

Spring Quarter:

Chemistry 82, Physical Chemistry.
Chemistry 63, Organic Chemistry.
E. E. 3, Essentials of Electrical Engineering.
Economics, Elective.

Fall Quarter:

SENIOR YEAR

Chemistry 21, Research in Chemistry.
Chemistry 83, Physical Chemistry.
Chemistry 11, Industrial Chemistry.
Geology 3, Mineralogy.

Winter Quarter:

Chemistry 22, Research in Chemistry.
Chemistry 64, Organic Chemistry.
Chemistry 12, Industrial Chemistry.
Geology 4, Mineralogy.

Spring Quarter:

Chemistry 23, Research in Chemistry.
Chemistry 84, Physical Chemistry.
Chemistry 13, Chemistry of Foods.
Chemistry 18, History of Chemistry.

II. BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING*Fall Quarter:*

FRESHMAN YEAR

E. E. 10, Elements of Electrical Engineering. (Half Course.)
Mathematics 2, Plane Trigonometry.
Chemistry 1, General Descriptive Chemistry.
Drawing 1, Mechanical Drawing. (Half Course.)

Winter Quarter:

E. E. 11, Elements of Electrical Engineering. (Half Course.)
Mathematics 1, Algebra.
Chemistry 2, General Descriptive Chemistry.
Drawing 2, Mechanical Drawing. (Half Course.)

Spring Quarter:

- E. E. 12, Elements of Electrical Engineering. (Half Course.)
- Mathematics 3, Analytical Geometry.
- English 1, Composition.
- Drawing 5, Machine Drawing. (Half Course.)

Fall Quarter:

SOPHOMORE YEAR

- E. E. 20, Principles of Electrical Engineering. (Half Course.)
- Mathematics 4, Calculus.
- English 11, Technical Composition.
- Drawing 6, Machine Drawing. (Half Course.)

Winter Quarter:

- E. E. 21, Principles of Electrical Engineering. (Half Course.)
- E. E. 24, Engineering Problems. (Half Course.)
- Physics 1, Mechanics, Sound and Heat.
- English 12, English and American Literature.

Spring Quarter:

- E. E. 22, Principles of Electrical Engineering. (Half Course.)
- E. E. 25, Engineering Problems. (Half Course.)
- Physics 2, Light, Electricity and Magnetism.
- C. E. 1, Surveying.

Fall Quarter:

JUNIOR YEAR

- E. E. 30, Direct and Alternating Current, Circuits and Machines.
- E. E. 33, Electrical Measurements. (Half Course.)
- C. E. 19, Hydraulics.
- Economics 1, General Course.

Winter Quarter:

- E. E. 31, Direct and Alternating Current, Circuits and Machines.
- E. E. 34, Electrical Measurements. (Half Course.)
- C. E. 16, Materials of Construction.
- Economics 2, General Course.

Spring Quarter:

- E. E. 32, Direct and Alternating Current, Circuits and Machines.
- E. E. 35, Electrical Measurements. (Half Course.)
- C. E. 17, Mechanics of Materials.
- Economics, Elective.

Fall Quarter:

SENIOR YEAR

- E. E. 40, Special Studies in Electrical Machinery.
- E. E. 43, General Electrical Engineering. (Half Course.)
- M. E. 1, Heat Engines.
- Non-Technical Elective.

Winter Quarter:

- E. E. 41, Special Studies in Electrical Engineering.
- E. E. 44, General Electrical Engineering. (Half Course.)
- M. E. 2, Engineering Thermodynamics.
- Non-Technical Elective.

Spring Quarter:

- E. E. 42, Special Studies in Electrical Engineering.
- E. E. 45, General Electrical Engineering. (Half Course.)
- M. E. 3, Steam and Hydro-Electric Power Plants.
- Non-Technical Elective.

III. BACHELOR OF SCIENCE IN CIVIL AND HIGHWAY ENGINEERING

Fall Quarter:

FRESHMAN YEAR

- English 1, Composition.
- Mathematics 1, Algebra.
- Chemistry 1, General Descriptive Chemistry.

Winter Quarter:

- Mathematics 2, Plane Trigonometry.
- Drawing 1, Freehand and Mechanical. (Half Course.)
- French 3, German 3, Spanish 3 (select one).
- Chemistry 2, General Descriptive Chemistry.

Spring Quarter:

- Drawing 2, Mechanical. (Half Course.)
- French 4, German 4, Spanish 4 (select one as above).
- Geology 1, General Course.
- Mathematics 3, Analytical Geometry.

Fall Quarter:

SOPHOMORE YEAR

- C. E. 1, Surveying and Plotting.
- Mathematics 4, Calculus.
- Physics 1, Mechanics, Sound and Heat.

Winter Quarter:

C. E. 3, Mechanics and Mechanism.
Mathematics 11, Calculus.
Geology 2, General Course.
Drawing 3, Topographical. (Half Course.)

Spring Quarter:

C. E. 5, Plane Table and Topographical Surveying. (Half Course.)
Mathematics 12, Analytic Mechanics.
Drawing 4, Topographical. (Half Course.)
Physics 2, Light, Electricity and Magnetism.

Fall Quarter:

JUNIOR YEAR

C. E. 9, Road and Railroad Surveying.
C. E. 11, Highway Engineering.
English 11, Technical Composition.
Mathematics 5, Descriptive Geometry.

Winter Quarter:

C. E. 16, Materials of Construction.
Mathematics 6, Descriptive Geometry. (Half Course.)
Economics 1, General Course.
English 12, English and American Literature.

Spring Quarter:

C. E. 10, Railroad Engineering.
C. E. 12, Highway Engineering.
C. E. 17, Mechanics of Materials.
Business Law.

Fall Quarter:

SENIOR YEAR

C. E. 18, Engineering Geology. (Half Course.)
C. E. 19, Hydraulics.
C. E. 23, Structures.
E. E. 1, Essentials of Electrical Engineering.

Winter Quarter:

C. E. 20, Water Power Development.
C. E. 24, Structures.
C. E. 26, Bridge Design.
E. E. 2, Essentials of Electrical Engineering.

Spring Quarter:

- C. E. 21, Sanitary Engineering.
- C. E. 25, Reinforced Concrete Structures.
- C. E. 27, Bridge Design.
- E. E. 3, Essentials of Electrical Engineering.

IV. BACHELOR OF SCIENCE IN MEDICINE**FIRST YEAR**

English 1-2, Composition.....	(3)
Mathematics 1-2, Advanced Algebra and Trigonometry...	(4)
History 1-2, United States.....	(3)
Botany 1-2, General Course.....	(3)
Chemistry 1-2, General Course.....	(3)

SECOND YEAR

Zoology 1-2, General Course.....	(3)
Physics 1-2, General Course.....	(3)
Chemistry, 34, Qualitative Analysis.....	(1½)
German 1-2, Composition and Literature.....	(3)
English 3-4, Composition and Literature.....	(3)
Elective	(3)

THIRD YEAR

Zoology 3, Comp. Anat. and Embryology of Vertebrates..	(1½)
Chemistry 43, Quantitative Analysis.....	(1)
Chemistry 61-62, Organic.....	(3)
Philosophy 1-2, Psychology.....	(3)
French 1-2, Composition and Literature.....	(3)
Elective	(4)

FOURTH YEAR*

Biological Chemistry, fall term.....	(6)
Toxicology, spring term.....	(6)
Human Anatomy, both terms.....	(10)
Histology, fall term.....	(9)
Embryology, spring term.....	(6)
Pharmacy, spring term.....	(6)

*The fourth and fifth years courses are given in the School of Medicine, where descriptions of courses may be found.

FIFTH YEAR

Applied Anatomy, fall term.....	(3)
Neurology, fall term.....	(6)
Bacteriology, fall term.....	(9)
Physiology, both terms.....	(7½)
Physiological Chemistry, fall term.....	(6)
Pathology, both terms.....	(9)
Pharmacology, both terms.....	(6½)
Minor Surgery, spring term.....	(4)
Hygiene, spring term.....	(1)

V. BACHELOR OF SCIENCE IN GEOLOGY

Fall Term:

FRESHMAN YEAR

Geology 1, Introduction to Geology.
 Mathematics 1, Algebra.
 Chemistry 1, General Course.
 Drawing 1, Freehand and Mechanical.

Winter Term:

Geology 2, Historical Geology.
 Mathematics 2, Plane Trigonometry.
 Chemistry 2, General Course.
 Drawing 2, Freehand and Mechanical.

Spring Term:

English 1, Composition.
 Mathematics 3, Analytical Geometry.
 Chemistry 31, Qualitative Analysis.
 German 3, or French 3, or Spanish 3.

Fall Term:

SOPHOMORE YEAR

Geology 3, Mineralogy.
 C. E. 1, Surveying and Platting.
 Chemistry 41, Quantitative Analysis.
 German 4, or French 4, or Spanish 4.

Winter Term:

Geology 4, Mineralogy.
 Physics 1, General Course.
 Chemistry 42, Quantitative Analysis.
 Drawing 3, Topographical Drawing.

Spring Term:

C. E. 5, Plane Table.
Physics 2, General Course.
Geology 7, Principles of Geology.
Geology 13, Petrology.

Fall Term:

JUNIOR YEAR

Geology 11, Ore Deposits.
Geology 25, Physiography.
English 11, Technical Composition.
Business Law.

Winter Term:

Geology 8, Stratigraphy.
Geology 12, Nonmetallic Minerals.
English 12, English and American Literature.
Economics 1, Principles of Economics.

Spring Term:

Geology 23, Soil Geology.
Geology 51, Advanced Field Geology.
Geology 8, Stratigraphy.
Geology 42, Mineral and Ore Deposits.

Fall Term:

SENIOR YEAR

Geology 52, Advanced Field Geology.
Geology 25, Engineering Geology.
Geology 54a. Indoor work completing field course.
Chemistry 45, Coal and Gas Analysis.

Winter Term:

Geology 21, Industrial Geography.
Chemistry 11, Industrial Chemistry.
Chemistry 46, Mineral and Fertilizer Analysis.
Geology 43, Advanced Mineralogy.

Spring Term:

Geology 22, Commercial Geography.
Chemistry 12, Industrial Chemistry.
Geology x, Special investigation bearing on stratigraphy, ore-deposits, coal and oil geology, or soil geology.

PREMEDICAL COURSE

FIRST YEAR

English 1-2	(3)
Mathematics 1-2	(4)
Chemistry 1-2	(3)
Botany 1-2	(3)
German A	(3)
or German 1-2	(3)

SECOND YEAR

Zoology 1-2	(3)
Physics 1-2	(4)
Chemistry 61-62	(3)
Chemistry 33-44	(2½)
German 1-2	(3)
or French 1-2	(3)
Electives	(2)

SCHOOL OF EDUCATION

REQUIREMENTS FOR ADMISSION

The requirements for admission to the School of Education are the same as for admission to the College of Liberal Arts (See page 61).

STATE TEACHERS' CERTIFICATE

According to the public school law of North Carolina, all high school teachers and principals, all superintendents of schools, all supervisors must hold state certificates appropriate to their work. The School of Education offers such courses as will aid candidates for such certificates to secure them without further examination.

Full information about these certificates and their requirements may be obtained from the Dean. Prospective teachers, principals, superintendents and supervisors should secure this information before registering for courses in the School of Education.

COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS IN EDUCATION

In order to be recommended for the Degree of Bachelor of Arts in Education, the student must have completed satisfactorily the four years course outlined below.

Freshman Year

	English 1	1 quarter
	History 1-2	2 quarters
	Mathematics 1	1 quarter
Select two	Greek 3-4	2 quarters
	Latin 1-2	2 quarters
	German 3-4	2 quarters
	French 3-4	2 quarters
	Spanish 3-4	2 quarters
	Education 1	1 quarter
	General Course 1-2-3	3 quarters (1 hour)

By postponement of any of those courses except English and Education until Sophomore year one course in Science (Botany 1-2, Chemistry 1-2 or Geology 1-2) may be taken in the Fresh-

man year. Not more than three courses in addition to the General Course may be taken in any one term except by special permission of the Committee on Courses.

Sophomore Year

Select one	{	English 3-4	2 quarters
		Botany 1-2	2 quarters
		Chemistry 1-2	2 quarters
		Physics 1-2	2 quarters
		Zoology 1-2	2 quarters
Select two	{	Greek 5	1 quarter
		Latin 3	1 quarter
		German 21	1 quarter
		French 5	1 quarter
		Spanish 5	1 quarter
Select two	{	Mathematics 2	1 quarter
		Education 3	1 quarter
		Education 4	1 quarter
		Psychology 1	1 quarter
		General Course 4-5-6	3 quarters (1 hour)

If a course in Science be taken in the Freshman year, the Freshman course then postponed must be taken in place of the course in Science required of Sophomores. Not more than three courses in addition to the General Course may be taken in any one term except by special permission of the Committee on Courses.

Junior Year

For Junior year students are required to select three courses open to Juniors in the School of Education and six courses open to Juniors in the College of Liberal Arts according to the regulations governing such selection.

Senior Year

For Senior year students are required to select three courses open to Seniors in the School of Education and six courses open to Seniors in the College of Liberal Arts according to the regulations governing such selection.

REGULATIONS

Candidates for the Degree of Bachelor of Arts in Education must complete satisfactorily 36 full courses plus the general course required of Freshmen and Sophomores in the College of Liberal Arts.

The proportion of these courses to be taken each year in the College of Liberal Arts and the proportion to be taken in the School of Education is as follows:

	<i>College of Liberal Arts</i>	<i>School of Education</i>
Freshman year	Eight courses and the general course	One course
Sophomore year	Seven courses and the general course	Two courses
Junior year	Six courses	Three courses
Senior year	Six courses	Three courses

Courses in the School of Education are classified into three groups; one group in the Principles of Education; one group in the Methods of Education; one group in the History of Education. The courses included within each group are given below.

PRINCIPLES	METHODS	HISTORY
Education 1	Education 2	Education 22
Education 4	Education 3	Education 23 (Half-course)
Education 41	Education 5	Education 24 (Half-course)
Education 42	Education 52	Education 25
Education 51	Education 62	Education 27
Education 61	Library Administration 1 (Half-course)	
Education 63	(Courses in special methods will be announced later)	

To insure a proper distribution of work and concentration of effort candidates for the degree of Bachelor of Arts in Education are required to select not less than five courses from the group on Principles; not more than four nor less than three from the group on Methods; not less than one nor more than two from the group on the History of Education. The prescribed and elective courses in Freshman and Sophomore years are to be counted in meeting this requirement.

In order to meet the requirement of the State Board of Examiners and Institute Conductors all students intending to teach in the high schools of the State whether candidates for A.B. in Education or not are required to take Education 51, Education 52, and two more full courses in Education. All candidates for A.B. in Education are, therefore, required to select Education 51 and Education 52 as two of the required six courses in Junior and Senior years.

All courses must be approved by the Dean before they are accepted by the Registrar.

SCHOOL OF COMMERCE AND FINANCE

A special bulletin covering the courses in Corporation Organization, Finance and Management, in Commerce and Marketing, in Accounting, and the Curriculum leading to the degree of Bachelor of Science in Commerce offered in the School of Commerce may be had on application to the President of the University.

THE GRADUATE SCHOOL

CANDIDATES FOR GRADUATE WORK

Graduates of the University of North Carolina and of other universities and colleges of good standing, are upon application to the Dean, ordinarily admitted to advanced courses of instruction, free of charge for tuition. There is, however, a registration fee of ten dollars for each quarter. An applicant for admission, unless a graduate of the University of North Carolina, is required to present his diploma and a certificate of scholarship and character.

Students who are not graduates may, if they prove themselves qualified, take graduate courses; but no graduate degree will be given a student who does not already hold a Bachelor's degree from some institution of approved standing.

The candidate for a graduate degree will not be allowed a second trial on examination; nor will he receive credit upon any course unless he makes a grade of at least 3.

DEGREES

The University offers to graduate students advanced work leading to the degrees of Master of Arts, Master of Science, and Doctor of Philosophy.

Master of Arts

Candidates for the degree of Master of Arts must complete nine courses, five of which must be taken from courses open to graduates, the remaining four from courses open to graduates or from undergraduate courses open to Juniors and Seniors. The candidate must select one major subject, to which he shall devote at least half of his time, and one allied minor subject. He may, with the approval of the Dean and of the professor in charge of his major subject, select a second minor subject. He shall be required to have a reading knowledge of French and German in case the professor in charge of his major subject thinks it necessary for efficient work.

A thesis based on the major subject of study and showing capacity for original research must be submitted on or before May 1 of the given year, and must be filed in typewritten form on or before May 15.

Master of Science

The degree of Master of Science is conferred under conditions similar to those stated above for the degree of Master of Arts.

Doctor of Philosophy

A candidate for the degree of Doctor of Philosophy is required to pursue, in residence at the University, a prescribed course of advanced study and research in one major subject and two allied minor subjects. In general a term of three years is required, but the degree may be secured in two years in the case of exceptional preliminary training in the major subject.

These requirements of residence and study are, however, secondary. The degree is conferred not simply for faithful study in a determinate field of work for a prescribed period, but because of a high attainment in a special branch of learning, which the candidate must manifest not only in examination but by a thesis which gives evidence of independent research. The thesis must be accepted before the candidate may be admitted to examination. The examinations are both written and oral. They demand a minute knowledge of a special field of work as well as a general acquaintance with the department of learning in which the candidate offers himself for the degree. The candidate must also give proof of his ability to read French and German.

THE SCHOOL OF LAW

REQUIREMENTS FOR ADMISSION

Students of the Law School are divided into three classes:

(a) Students for the degree of LL.B., who must have completed two years of collegiate work, the equivalent of 30 hours.

(b) Students taking regular work in the school, but not candidates for the degree, must, unless they are "special students," be able to matriculate in the Freshman class of the University.

(c) "Special students." Men over twenty years of age, unable to qualify under (a) or (b) above, may be admitted to classes, upon presenting evidence of such training as will enable them to make profitable use of the opportunities offered in the school.

SIX HALF HOURS OF LAW CREDITED TOWARD GRADUATION IN THE COLLEGE OF LIBERAL ARTS

Seniors in the College may take as electives courses selected with the approval of the Dean from the work of the Law School. Courses so elected must not be less than 6 half hours for the Senior year, and credit shall not exceed 6 half hours.

DEGREE OF LL.B.

Students of the Law School of class (a) as defined under "Requirements for Admission" will be recommended for the degree of Bachelor of Laws (LL.B), upon satisfactory completion of three years of work as follows:

For the first and second years of law study, the regular work outlined in "Courses of Instruction" below, amounting to fifteen hours per week for three years, and for the third year at least twelve hours of work selected with the approval of the Law Faculty from the elective courses indicated.

In the discretion of the Law Faculty, credit may be given for work done in other recognized law schools of a standard no less than this school, which requires a three years course for the degree of Bachelor of Laws—but such credit shall not dispense with residence at the University as students of Law for at least one year.

COMBINED COURSE LEADING TO A.B. AND LL.B.

The University offers the combined degrees of A.B. and LL.B. to students who have complied with the following requirements:

1. The courses in the College of Liberal Arts outlined below.
2. All academic work to be completed by the end of the last regular examination period of the Junior year of the candidate.
3. The completion of all courses in the School of Law for the degree of LL.B.

Students taking this combined course will be enabled to get the two degrees in six instead of seven years.

Prescribed courses in the College of Liberal Arts for the combined degree:

FIRST YEAR		SECOND YEAR	THIRD YEAR
	Eng. 1-2	Eng. 3-4	Econ. 1-2
	Eng. 11-12	Lat. 3-4	Philos. 1-2
	Math. 1-2	Hist. 3-4	Eng.
	Lat. 1-2		Hist.
Select one	Greek 3-4	Select one	Elective
	French 3-4		
	Ger. 3-4	Select one	
	Hist. 1-2		
		Greek 5-6	
		French 5-6	
		Ger. 21-22	
		Math. 3-4	
		Phys. 1-2	
		Chem. 1-2	

NUMBER OF HOURS REQUIRED OR PERMITTED

No student will be permitted, without express permission of the Faculty, to take less than ten or more than eighteen hours of study weekly. At least ten hours of study is required to make a law student within the requirement of the Supreme Court, requiring two years law study of applicants for license.

MOOT COURT

A Moot Court conducted by the students meets weekly, a member of the Faculty usually presiding.

OPPORTUNITIES OF UNIVERSITY LIFE

Law students enjoy all the privileges of university life, the University Library, gymnasium, athletics, literary societies, and eligibility to student organizations of all sorts. Without additional expense, courses in Economics, Philosophy, History, English and Public Speaking are open to law students who satisfy entrance requirements for the courses selected with the approval of the Dean of the Law School and of the Department concerned.

LAW LIBRARY

An excellent Law Library is contained in the Law Building, which is open to law students under proper rules at all reasonable hours.

PRIZES

CALLAGHAN AND COMPANY, LAW PUBLISHERS, CHICAGO:

Prize. A copy of the Cyclopedic Law Dictionary is offered by the publishers to the member of the third year class who obtains the best general average for the year in his work.

FEES AND EXPENSES

See Pages 48-49.

COURSES**First Year, Required Curriculum**

CONTRACTS: Two quarters, 4. McIntosh's *Cases on Contracts*. Mr. McINTOSH.

TORTS: Two quarters, 3 and 4 respectively. Burdick's *Cases on Torts*. Mr. WINSTON.

PROPERTY: Three quarters, 3 each. Finch's *Cases on Property*, selected cases, lectures. Mr. McGEHEE.

AGENCY: One quarter, 4. Mechem's *Cases on Agency*. Mr. McGEHEE.

CRIMINAL LAW AND PROCEDURE: One quarter, 4. Derby's *Cases*, selected cases, lectures. Mr. WINSTON.

CIVIL PROCEDURE AT LAW: One quarter, 5. Sunderland's *Cases on Common Law Pleading*. Mr. McGEHEE.

BAILMENTS: One quarter, 4. Goddard's *Cases on Bailments*. Mr. WINSTON.

PERSONS: One quarter, 3. Peck's *Domestic Relations*. Mr. McGEHEE.

INTRODUCTION TO LAW: One quarter, 1.

Second Year, Required Curriculum

EQUITY: Two quarters, 4 (or 5 and 3). Bispham's *Equity*. Mr. WINSTON.

CODE OF CIVIL PROCEDURE: Two quarters, 3. N. C. Code of Civ. Proc., selected cases, lectures. Mr. McINTOSH.

PROPERTY: One quarter, 4. Continuation of Course from first year. Same text. Mr. McGEHEE.

NEGOTIABLE INSTRUMENTS: One quarter, 4. N. I. Law. *Huffcut's Cases*. Mr. WINSTON.

SALES: One quarter, 4. *Erwin's Cases*, selected cases. Mr. McGEHEE.

EQUITY PLEADINGS: One quarter, 2. *Rush's Equity Pleading*. Mr. McINTOSH.

EVIDENCE: One quarter, 5. *Hughes on Evidence*. Mr. McINTOSH.

WILLS AND ADMINISTRATIONS: One quarter, 5. *Costigan's Cases on Wills*. Mr. WINSTON.

CONSTITUTIONAL LAW: One quarter, 3. *Hall's Illustrative Cases*, selected cases, lectures. Mr. McGEHEE.

PRIVATE CORPORATIONS: One quarter, 4. *Burnett's Cases*, selected cases. Mr. McGEHEE.

Third Year

The third year of law must consist of at least twelve hours, selected with the approval of the Dean, five elective subjects. Subjects offered during 1919-1920 will be selected from the following list:

PARTNERSHIPS: One quarter, 4. *Mechem's Cases on Partnership*. Mr. WINSTON.

MUNICIPAL CORPORATIONS: One quarter, 4. *Macy's Cases on Municipal Corporations*. Mr. McINTOSH.

CONSTITUTIONAL LAW: Continuation of course from second year. One quarter, 3. Mr. McGEHEE.

INSURANCE: One quarter, 4. *Richard's Cases on Insurance*. Mr. WINSTON.

TRUSTS: One quarter, 3.

MORTGAGES AND SURETYSHIP: Two quarters, 3.

PUBLIC SERVICE CORPORATIONS: One quarter, 3.

FEDERAL COURTS: One quarter, 3. Hughes' *Federal Procedure*. Mr. McINTOSH.

BANKRUPTCY: One quarter, 3. Federal Bankruptcy Law, lectures. Mr. McINTOSH.

ADMIRALTY: One quarter, 2. Hughes *on Admiralty*. Mr. McINTOSH.

INTERNATIONAL LAW: One quarter, 3. Evans' *Cases*. Mr. McGEHEE.

HISTORY OF LAW: One quarter, 2.

CONFLICT OF LAWS: Two quarters, 2.

CONVEYANCING: One quarter, 2.

DAMAGES: One quarter, 2.

STATUTES AND DRAFTING OF STATUTES: One quarter, 2.

OFFICE PRACTICE: One quarter, 2.

LEGAL ETHICS: Three Lectures (not credited).

EXPLANATION AS TO COURSES OF INSTRUCTION

The lengthening of the course for the degree of LL.B. to three years, the adjustment of the work necessary because of a change from a bi-semestral to a three-quarter division of the year, with some intensification of studies, through the enlargement of the faculty make this statement of courses tentative in some details. The names of instructors and texts represent the last academic year.

SUMMER LAW SCHOOL

The Summer Term of the Law School extends over ten weeks ending just previous to the August Bar Examination. In 1918, the term begins June 9, and ends August 15. The purpose of the Summer Term is to present a review of the subjects required by the Supreme Court of applicants for license, and to be of service to men unable to attend during the regular scholastic year.

LECTURES AND RECITATIONS

The instruction will be given in two recitation periods daily of an hour and a half each:

An outline of the work and of the time assigned to the various subjects is approximately as follows:*

Domestic Relations (6 lectures); Contracts (18 lectures); Torts (12 lectures); Corporations (6 lectures); Evidence (6 lectures); Pleading and the Code (12 lectures); Criminal Law (8 lectures); Personal Property (6 lectures); Real Property (20 lectures); Executors and Administrators (6 lectures); Equity (9 lectures); Constitutional Law (9 lectures); Legal Ethics (2 lectures).

The text-books used will be, as far as possible, those used at the regular session of the school, but any standard text-book on any of these subjects will be accepted.

EXAMINATION

Examinations will be held in each subject as the assigned lectures are completed, and a certificate will be given to students completing the whole course. Work in the Summer School will not be credited in the regular term.

TUITION AND EXPENSES

Tuition for term	\$ 30.00
Registration and incidental fees	5.00

These fees cover privileges of library, gymnasium and baths.

Board in the village without room will cost from \$16 to \$23.

For further information address the Dean of the Law School or the President of the University of North Carolina, Chapel Hill, N. C.

*Other subjects required by the Supreme Court will be treated in connection with the above subjects, as Negotiable Instruments in connection with Contracts, Bailments with Torts, etc.

ADMISSION TO BAR OF NORTH CAROLINA

Admission to the Bar is under the immediate direction of the State Supreme Court. The rules of the Court on this subject are given below.

It will be noticed that a two years course of reading and the passing of a written examination on an extended list of subjects are prerequisites.

The reading should be done at an approved law school. But the requirement may be met in part by private reading. Students who have read privately or in a law office, may have an opportunity of reviewing the course in a Summer Term or better by a year in the school and a summer term. No certificate will be given to students in respect to time not actually spent in the school, or covering subjects not studied therein. In case of students not completing their work here, but desiring preparation for the Bar examination subjects may, with the permission of the Faculty be selected from the curriculum for different years.

Such a course is not advised except in cases where limited means render it a regrettable necessity. The student should remember that he is preparing for his life-work, and only detriment to that life-work can in general result from a feverish anxiety to cut short the period of preparation and to abridge the studies which experience has marked out for the acquisition of the necessary qualifications.

RULES OF THE SUPREME COURT OF NORTH CAROLINA AS TO ADMISSION TO THE BAR

1. Applicants for license to practice law will be examined on the last Monday in January and the Monday preceding the last Monday in August of each year, and at no other time. Examination will be in writing.

2. Applicants must have attained the age of twenty-one years and must have studied:

Ewell's Essentials, 3 volumes; Clark's Code of Civil Procedure; Revisal of 1905; Constitution of North Carolina; Constitution of the United States; Creasy's English Constitution; Sharswood's Legal Ethics; Sheppard's Constitutional Text Book; Cooley's Principles of Constitutional Law (or their equivalents). Also some approved text-book on each of the following subjects: Agency, Bailments, Carriers, Corporations, Equity, Executors, Negotiable Instruments, Partnership, and Sales.

Applicants must have read law for two years at least, and shall file with the clerk a certificate of good moral character, signed by two members of the bar who are practicing attorneys of this Court, and also a certificate of the Dean of a Law School or a member of the bar of this Court, that the applicant has read law under his instruction, or to his knowledge or satisfaction, for two years, and upon examination by such instructor has been found competent and proficient in said course. Such certificate, while indispensable, will of course not be conclusive evidence of proficiency. An applicant from another State can file a certificate of good moral character signed by any State officer of the State from which he comes.

If the applicant has obtained license to practice law in another State, in lieu of the certificate of two years reading and proficiency he can file (with leave to withdraw) his law license issued by said State.

3. Each applicant shall deposit with the clerk a sum of money sufficient to pay the license fee before he shall be examined, and if upon examination he shall fail to entitle himself to receive a license, the money will be returned to him. The amount required is \$23.50, twenty dollars of which is the tax prescribed by statute, \$1.50 registration fee, and \$2 due printers for the parchment upon which certificates of license are issued.

The above requirements apply also to lawyers from other States wishing to locate and engage in the practice here. No *formal application* is required and no application blanks are used. The applicant may comply with above requirements at any time by Friday preceding day of examination, either by mail or in person.

THE SCHOOL OF MEDICINE

REQUIREMENTS FOR ADMISSION

I. Requirements for admission to the Premedical and Combined Courses. The requirements for admission to the Premedical and Combined courses are fifteen units (corresponding to a course of four years in the high school), of which eight units are prescribed and six are elective. The prescribed units are as follows: English, 3 units; Mathematics, 2 units; American History and Civics, 1 unit; Foreign Language (Latin, Greek, German, or French), 2 units. The elective units may be selected from the following: English Language and Literature, 1 to 2 units; Foreign Languages, 1 to 4 units; Natural Science, Physics, Chemistry (one year each), Biology, Zoology, Botany, Physiology (one-half year each), $\frac{1}{2}$ to 2 units; Physiography, $\frac{1}{2}$ unit; History, 1 to 3 units; Drawing, 1 unit; Vocational Subjects, 3 units.

II. Requirements for Admission to the Medical Course. The requirements for admission to the medical course are 2 years (60 semester hours) of college work, which must include a minimum of twelve semester hours in Chemistry, eight semester hours in Biology, eight semester hours in Physics, six semester hours in English, and six semester hours in a Modern Language (French or German). *Students will not be admitted with less than the total of sixty semester hours, nor with less than the required number of hours in Science and Language subjects.*

III. Admission to Advanced Standing. Candidates for admission to the second year of the medical course must present certificates from an accredited medical school stating that they have had the required fourteen units, the year of college work as indicated in Section II, and have completed the subjects of the first year of the medical course as outlined on page 101.

COURSES OFFERED

The following courses are offered:

1. *A Premedical Course of Two College Years. This course is arranged to provide the subjects and number of hours required for admission by a large number of medical schools. It is offered as a guide to those students beginning a preparation for the study of medicine who are unwilling or unable to take a more extensive collegiate course.

*An outline of these courses is given on pages 82 and 85.

2. *A Combined Course Leading to the Degree of Bachelor of Science. This is a combination of a course of three collegiate years including the subjects most fundamental in the preparation for the study of Medicine and the medical course of two years, on the completion of which the degree of Bachelor of Science is granted. The student may, therefore, obtain a collegiate degree and the degree of Doctor of Medicine in seven years. It is recommended to those who find it impracticable to spend four years in collegiate work.

3. The Medical Course. The course leading to the degree of Doctor of Medicine consists regularly of four years in strictly medical subjects. The subjects are arranged naturally into two main groups; the so-called Laboratory and Clinical groups, and two years are given to each group. The medical course offered includes the subjects of the first group and occupies a period of two years. On completing this course, the student is prepared to begin the study of the clinical subjects, and may enter the third year in other medical schools. Full credit is allowed in practically all medical schools.

THE MEDICAL COURSE

First Year

BIOLOGICAL CHEMISTRY: Six hours weekly, first and second quarter.

TOXICOLOGY: Six hours weekly, third quarter.

HISTOLOGY: Fifteen hours weekly, first quarter.

OSTEOLOGY AND ARTHROLOGY: Six hours weekly, first quarter.

GROSS ANATOMY: Twenty-four hours weekly, second quarter.

NEUROLOGY: Eight hours weekly, third quarter.

EMBRYOLOGY: Three hours weekly, first and third quarters.

APPLIED ANATOMY: Nine hours weekly, third quarter.

Second Year

PHYSIOLOGY: Six hours weekly, first half; nine hours weekly, second half.

PHYSIOLOGICAL CHEMISTRY: Six hours weekly, first half.

BACTERIOLOGY: Nine hours weekly, first half.

PATHOLOGY: Ten hours weekly, first half; twelve hours weekly, second half.

PHARMACOLOGY: Three hours weekly, first half; ten hours weekly, second half.

MINOR SURGERY AND PHYSICAL DIAGNOSIS: Four hours weekly, second half.

HYGIENE: One hour weekly, second half.

Summary of First and Second Years

<i>Subjects</i>	<i>Hours</i>
Chemistry (Biological)	180
Anatomy	680
Physiology	330
Bacteriology	135
Pathology	330
Pharmacology	315
Pharmacy	90
Minor Surgery and Physical Diagnosis.....	60
Hygiene	15

EXAMINATIONS

Regular examinations on the first year subjects will be held during the examination periods of the College of Liberal Arts at the close of each quarter. In the second year the examinations will be held at mid-term, and at the close of the year. Special examinations for the removal of conditions will be allowed during the week preceding the close of the third quarter and during registration week in September.

An examination will not be allowed a student who is charged with ten per cent of unexcused absences, or with absences amounting to twenty per cent of the total number of hours assigned the subject.

If the student receives the grade of 6 or its equivalent or fails on a second examination he will be required to repeat the course. If a first-year student fails to pass a major subject (Anatomy, Histology) or more than one minor subject he will not be registered as a second-year student the following year.

CERTIFICATES

A certificate will be granted to a student who completes satisfactorily the required preliminary work and the medical course. In the event of a failure to complete the work a statement indicating the subjects completed will be given. Credits will not be allowed for attendance only.

EQUIPMENT

The Medical Building, Caldwell Hall, is a modern laboratory building, and each laboratory is well equipped with all apparatus necessary for teaching purposes. The departmental library is supplied with well chosen journals, especially those concerned with

the laboratory subjects. No unnecessary restrictions are placed on the use of the laboratories and the library, and the students are encouraged to use them in every way that may be profitable.

The students also have free access to the General Library, and the departmental libraries in the Chemical, Physical, and Biological laboratories.

EXPENSES

See pages 48-49.

PRIZES AND SCHOLARSHIPS

THE WOOD SCHOLARSHIP. (Established in 1895.) Mrs. Mary Sprunt Wood, of Wilmington, has founded, in memory of her husband, the late Dr. Thomas Fanning Wood, a scholarship covering the tuition and fees.

COURSES OF INSTRUCTION

CHEMISTRY

71. BIOLOGICAL CHEMISTRY: a general survey of Organic Chemistry and the synthetic production of compounds of special interest to medical men. Lectures and laboratory work. Prerequisite, Chemistry 31. Fall Quarter. Professor DOBBINS and Mr. NEIMAN.

Laboratory fee, \$4.00.

72. BIOLOGICAL CHEMISTRY: a detailed study of the fats, carbohydrates and proteins. Lectures and laboratory work. Prerequisite, Chemistry 71. Winter Quarter. Professor DOBBINS and Mr. NEIMAN.

Laboratory fee, \$4.00.

74. TOXICOLOGY: Chemical behavior of poisons and their separation from foods and animal tissues. Lectures and laboratory work. Prerequisite, Chemistry 72. Spring Quarter. Professor DOBBINS and Mr. NEIMAN.

Laboratory fee, \$4.00.

ANATOMY

The courses include gross and microscopic anatomy, embryology the topography of the body, the application and relation of anatomy to medicine and surgery, and the anatomy of the Central Nervous system and the organs of Special Sense.

Ample facilities are offered to any who may desire to pursue advanced work in the field of Anatomy.

FIRST YEAR

FIRST QUARTER

1. OSTEOLOGY AND ARTHROLOGY. Professor MANGUM. *Six hours weekly.*

Detailed study of the skeleton, each student being provided with a complete set of disarticulated bones which he is required to demonstrate and draw.

The joints are studied from prepared specimens.

2. GENERAL HISTOLOGY AND ORGANOLOGY. Professor MANGUM and Dr COPPRIDGE. *Fifteen hours weekly.*

This course includes: (a) a study of the fundamental tissues, followed by (b) the study of the microscopic structure of the various organs. Lectures, demonstrations, and laboratory.

Text: Lewis and Stöhr.

3. ADVANCED HISTOLOGY. Professor MANGUM. To those who have completed course 2 or its equivalent opportunity will be offered to pursue advanced work. Arrangements for this course may be made with the instructor.

4. EMBRYOLOGY. (General Development.) Professor MANGUM. *Three hours weekly.*

Lectures upon the development of the human body.

Text: Bailey and Miller.

SECOND QUARTER

5. GROSS ANATOMY. Professor MANGUM and Mr. COBB. *Twenty-four hours weekly.*

The student makes a complete dissection of the human body under the constant supervision and direction of an instructor, who insists upon the use of the texts, guides, and atlases, and holds practical examinations upon the cadaver. Laboratory talks, demonstrations, and conferences take the place of lectures.

Texts: Cunningham, Gray, Piersol.

THIRD QUARTER.

6. EMBRYOLOGY. (Organogenesis.) Professor MANGUM. *Three hours weekly.*

Laboratory study of the embryos of the frog, chick, and pig, supplemented by lectures and demonstrations.

Text: Laboratory Text-Book: (Minot.)

7. CENTRAL NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE.
Professor MANGUM. *Nine hours weekly.*

A special laboratory study of the gross and microscopic anatomy of the cord and encephalon. Each student is provided with numerous prepared dissections of the human brain and a series of sections through the cord and the brain stem, which he studies with the aid of a guide. A human brain is then given to each group of four men and by them dissected in order to correlate and systematize the work already done. A practical examination tests the student's ability to locate the various tracts and nuclei.

8. APPLIED ANATOMY. Professor LAWSON. *Nine hours weekly.*

Embraces the external markings and surface anatomy of the organs (viscera, vessels, nerves, etc.), their location and inter-relationships; topographical landmarks (normal and abnormal); incisions to reach arteries and nerves; influence of muscles upon fractures and luxations; and many other practical facts which may serve as aids to diagnosis and treatment. Instruction is by lectures and demonstrations upon the cadaver. Special dissections, preparations, models, and numerous drawings by the students are used as aids in this course.

Text: Davis.

SECOND YEAR

PHYSIOLOGY: Professor MANNING.

The course in Physiology is given in three parts, as follows:

1. General Physiology: a lecture course of five hours a week extending through the year; a brief account of cell physiology is followed by a detailed discussion of the facts and theories of Human Physiology; attention is called to the application of physiology in medical practice as far as possible.

Text: Howell.

2. Physiological Chemistry: a laboratory course of six hours a week during the fall term. The purely chemical aspects of Biochemistry are considered in the course in Organic Chemistry (Chem. 71-72) given in the first year. In the course in Physiological Chemistry a practical application of the principles of Biochemistry is made in the study of Human Physiology. The chemistry of digestion, of the secretions, of blood, and of the urine is studied in detail, qualitatively and quantitatively, and such tissues are examined as will afford evidence of the course of metabolic processes. Laboratory Notes.

References: Matthews, Hawk.

3. Experimental Physiology: a laboratory course of five hours a week during the spring term. In this course the student studies the heart and neuro-muscular systems on the turtle and the frog; the circulatory, respiratory, and glandular systems on the mammal. In the former the class is divided into groups of two and in the latter into groups of four. Each group is supplied with mimeographed directions for the performance of each experiment and a full equipment of apparatus, and each student is required to keep a record of the observations, including tracings.

References: Stewart, Porter, Hill, etc.

MATERIA MEDICA AND PHARMACOLOGY: Professor MACNIDER and Mr. FOLSOM.

1. Materia Medica: the preliminary study of drugs is given as a part of the course in Pharmacy which extends throughout the spring term of the first year in medicine. The student is required to learn the various preparations of the more important drugs, their dose, and chemical incompatibilities. Each student makes representative preparations of the different drugs.

2. Pharmacology: the course in Pharmacology extends throughout the second year of the medical curriculum. The character of the work permits a division of the course into three parts: (a) A consideration of the ways in which drugs may affect the organism. This introduction embraces a discussion of the various physico-chemical forces influencing drug activity, and the modification of the action of these conditions in different pathological states of the organism, such, for instance, as febrile conditions and various metabolic disturbances. (b) A general study of the pharmacology of the important drugs. The drugs are considered in groups depending upon their predominant effect in the body. The student learns the preparation, their dose, physiological incompatibilities, and considers in detail the way in which the drugs act as pharmacological agents. The symptoms and treatment of poisoning are considered following the discussion of the pharmacology of the group. (c) A consideration of the pharmacology of drugs in the pathological animal, with a discussion of the modification of drug activity in various pathological states. In conjunction with this study emphasis is given to the use of drugs as therapeutic agents and a study is made employing such remedies as are indicated in the form of a prescription. Students are required to write prescriptions, which are then subjected to the criticism of various members of the class and the instructor.

3. Pharmacodynamics: this part of the general course in pharmacology consists in a careful and accurate study of the action of practically all of the more important drugs on the lower animals.

For this work, the higher animals, such as the cat and dog, are chiefly used. The class is divided into groups of two or four, and the experimental work is conducted by the student. Each student is required to hand in to the instructor at the completion of the course a laboratory notebook containing a detailed account of each experiment, an explanation of the results obtained, and the tracings made during the experiment. Oral and written recitations are frequently held.

Text: Cushny, *Pharmacology and Therapeutics*. Reference: Sollmann, *A Manual of Pharmacology*; Meyer and Gottlieb, *Pharmacology, Experimental and Clinical*; Jackson, *Experimental Pharmacology*.

4. Advanced Pharmacology: two types of courses will be offered: (a) an experimental study of the action of various drugs upon the normal animal; (b) an experimental study of the action of various drugs and other agents upon the pathological animal.

BACTERIOLOGY: PROFESSOR MACNIDER and Mr. HUNTER.

The student learns by practical experience the methods of cultivating, staining, and identifying the principal pathogenic bacteria. A few nonpathogenic and saprophytic forms are studied. The pathological significance of the various forms is explained by lectures, and the pathogenicity of some of the forms is determined by inoculation experiments performed by the class. At intervals during the course unknown organisms are given for identification. In addition to this, each student is required to isolate from the air, water, fecal matter, or pus, two organisms and determine their species. The latter part of the course is devoted to the bacteriological study of milk and water.

Text: Jordan. Reference: Park and McFarland.

MINOR SURGERY AND PHYSICAL DIAGNOSIS: PROFESSOR LAWSON.

The class practices the application of bandages, and learns the modern method of dressing wounds. A short course in Physical Diagnosis is given.

Text: Davis on Bandaging.

PHARMACY FOR MEDICAL STUDENTS: PROFESSOR BEARD.

This course in pharmacy will consist of two lectures supplemented by two laboratory periods each week. Beginning with a consideration of the metric system as applied to writing prescriptions and preparing formulæ, the course will embrace, successively, medical arithmetic, prescription writing, official galenical and magistral preparations with their doses, cellulose and its compounds, carbohydrates, coal and wood tar products, resins, gums,

esters, volatile oils, alkaloids, animal drugs, and, lastly, solubility and incompatibility. The student will be required to make the preparations commonly prescribed, in order that he may be acquainted with their nature and composition. In addition, he must demonstrate the various forms of incompatibility liable to occur in prescriptions.

Text-book: DeLorme's *Manual of Pharmacy for Physicians*.

HYGIENE: Professor MANNING.

A short course in the elementary principles of Hygiene and Sanitation.

Text: Roseman.

PATHOLOGY: Professor MACNIDER and Dr. COPPRIDGE.

1. This course embraces a consideration of General and Special Pathology from the chemical and physiological as well as the morphological aspects. Lectures and recitations are combined with laboratory work in a study of both gross and microscopical preparations.

In this work carefully selected loan sections form the basis for the study, but especial attention is paid to the experimental production, in laboratory animals, of the various common lesions due to mechanical, chemical, and bacterial agents. Under the guidance of the instructor the student produces these lesions and prepares his own specimens therefrom. Fall term, three hours; spring term, thirteen hours a week.

Text: Mallory. Prerequisite, Histology, Bacteriology.

SCHEDULE OF RECITATIONS

FIRST YEAR

FIRST QUARTER	Anatomy 8:30 Every day	Histology 9:45-12:45 Every day except Sat.	Embryology 9:45-12:45 Sat.	Biochem. 2:00-4:00 Mon., Wed. 2:00-3:00 Tues., Thurs.	
SECOND QUARTER	Anatomy 8:30-12:45 Every day	Biochem. 2:00-4:00 Mon., Wed. 2:00-3:00 Tues., Thurs.			
THIRD QUARTER	Neurology 9:45-12:45 Mon., Fri. 2:00-4:00 Fri.	Embryology 9:45-12:45 Wed.	Applied Anat. 8:30 Every day 9:45-12:45 Sat.	Toxicology 2:00-4:00 Mon., Wed. 2:00-3:00 Tues., Thurs.	Pharmacy 9:45-12:45 Tues., Thurs.

SECOND YEAR

FIRST HALF	Physiology 8:30 Every day	Physiological Chem. 2:00-4:00 Mon., Wed., Fri.	Bacteriology 9:45-12:45 Tues., Thurs., Sat.	Pathology 10:45-12:45 Mon., Wed., Fri. 2:00-4:00 Tues., Thurs.	Pharmacology 9:45 Mon., Wed., Fri.
SECOND HALF	Physiology 9:45 Mon., Tues., Wed., Thurs. 10:45-12:45, 2:00-4:00 Mon., Fri.	Pathology 10:45-12:45 Tues., Wed., Thurs. 8:30-12:45 Sat. 2:00-4:00 Wed.	Pharmacology 8:30 Every day except Sat. 10:45-12:45, 2:00-4:00 Mon., Fri.	Minor Surgery Physical Diag. 2:00-4:00 Tues., Thurs.	Hygiene 9:45 Fri.

THE SCHOOL OF PHARMACY

ADMISSION

Candidates for admission into the School of Pharmacy should present themselves on the same days and at the same hours with candidates for admission into the College. The session is of the same length as the college year.

Candidates for the degrees of Ph.G., Ph.C., and P.D. must be on entering at least 17 years old, and must have completed either a high school course of study or its equivalent in units. They may, however, enter the first-year special course without these prerequisites.

The members of the School of Pharmacy enjoy all the privileges extended to other students of the University.

EXPENSES

See pages 48-49.

REQUIREMENTS FOR GRADUATION

For the Degree of Graduate in Pharmacy (Ph.G.)

In order to be recommended for the degree of Graduate of Pharmacy (Ph.G) the student must have completed with credit a high school course of study or its equivalent in units, and the studies outlined above. The student must have completed the work of both sessions in the School of Pharmacy of this University, or of one session (the second) here after one in some other recognized school of pharmacy. He must obtain satisfactory marking in attendance, making a general average of 70 per cent in the various branches, and submit a satisfactory thesis. The student must have had a practical experience of at least four years with some qualified pharmacist in a dispensing store. The two years spent in college count as two years practical experience. Students who have not had the full four years experience will be permitted to stand examinations for graduation, but their diplomas will be withheld until they shall have satisfied this requirement. Of the four years of experience required for license by the State Board of Pharmacy, the work done in the pharmaceutical laboratory will count month for month, up to twenty-four months.

For the Degree of Doctor of Pharmacy (P.D.)

The degree of Doctor of Pharmacy is conferred upon graduates only after a year of residence at the University. They must pursue advanced work as outlined on page 112 and present a thesis embodying the results of an original investigation.

For the Degree of Pharmaceutical Chemist (Ph.C.)

The requirements for the degree of Pharmaceutical Chemist are the same as those for the degree of Doctor of Pharmacy, with the exception that no practical experience in a drug store is necessary as a prerequisite.

EXAMINATIONS

Final examinations are held at the end of each term on the subjects embraced in the course.

Quizzes upon the different branches are held regularly. Quizzes upon Materia Medica, Chemistry, and Pharmacy are held once a week. Students are required to make an average of 70 per cent on all examinations and quizzes.

COURSES OF INSTRUCTION**FIRST YEAR**

Pharmacy 1 (5)
Pharmacy 4 (4)
Materia Medica 1 (5)
Botany 1-2 (6)
Chemistry 1-2 (6)

SECOND YEAR

Pharmacy 2 (5)
Pharmacy 5 (8)
Pharmacy 6 (3), Third Term
Materia Medica 2 (5) or
Materia Medica and Pharmacology (5) (optional)
Chemistry 31 (5)
Chemistry 74 (3), Third Term
Physiology, Fall Term (3)

THIRD YEAR

Pharmacy 3 (2)
Pharmacy 7 (5)
Physiology (3)
Bacteriology (6)

- Chemistry 11-12 (5)
- Chemistry 41-42 (4)
- Chemistry 61-62 (5)
- Chemistry 63-64 (5)

Pharmacy

1. Theory and Practice of Pharmacy. Lectures with practical demonstrations. First year. *Each quarter, five hours.* Professor HOWELL.

2. Theory and Practice of Pharmacy. A continuation of Pharmacy I. Second year. *Each quarter, five hours.* Professor HOWELL.

3. Commercial Pharmacy. A lecture course in drug store management, salesmanship, and advertising. Third year. *Each quarter, two hours.* Professor BEARD.

4. Operative Pharmacy. (Laboratory.) This course is designed to demonstrate the various operations outlined in Pharmacy I. Text-book: Remington's *Theory and Practice of Pharmacy*. First year. *Each quarter, four hours.* Professor BEARD and Mr. WHITE.

6. Urinary Analysis. By means of laboratory work, supplemented by lectures, the student is drilled in making thorough qualitative and quantitative analyses of urine. Second year. *Spring quarter, three hours.* Text-book. Hawks' *Physiological Chemistry*. Professor BEARD.

7. Manufacturing Pharmacy. This course will consist of lectures, supplemented by laboratory work. The preparation of pharmaceutical products on a commercial scale will be given much consideration, as will the economics of manufacturing. The student will be acquainted with the sources, importation, and market prices of those agents which enter into remedies and pharmaceuticals. *Each quarter, five hours.* Professor HOWELL.

Materia Medica and Pharmacology

1. Materia Medica. A lecture course devoted to a consideration of the source and physical nature of crude drugs. Text-book: Sayre's *Organic Materia Medica*. First year. *Each quarter, five hours.* Professor BEARD.

2. *Materia Medica*. A study of the action of drugs on the human body. Text-book: Wilcox's *Materia Medica and Therapeutics*. Second year. *Each quarter, three hours*. Professor BEARD.

3. *Materia Medica and Pharmacology*. An advanced course in the action of drugs. Second year. *Each quarter, three hours*. Professor MACNIDER.

Bacteriology

The student learns by practical experience the methods of cultivating, staining, and identifying the principal pathogenic bacteria. A few nonpathogenic and saprophytic forms are studied. Second year. *Fall and winter quarter, six hours*. Professor CORBRIDGE.

Physiology

A somewhat elementary course on the structure and function of the human body. Second year. *Fall quarter, two hours*. Professor BEARD.

PHARMACEUTICAL LABORATORY

Person Hall is occupied by the Department of Pharmacy. It contains ten rooms, each one of which is equipped with water, gas, and electricity. It is well supplied with large, high windows, and heated from the central heating plant.

OTHER LABORATORIES

The laboratories of Physics, Chemistry, Biology, and Medicine are open to students in Pharmacy. These laboratories are all equipped with the most approved apparatus for experimentation and illustration.

In addition to these advantages, students of this department enjoy the privileges of the University reading room, in which are filed all the leading newspapers and magazines, and free access to the University Library, which number 74,000 volumes and 18,000 pamphlets.

THE AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES

The School of Pharmacy is a member of the American Conference of Pharmaceutical Faculties, the object of which is the promotion of higher pharmaceutical education. Through the influence of the Conference higher standards of education are being adopted from time to time by its members and others, evidenced by

the fact that several states by law or by Board of Pharmacy ruling recognize the standards set by the Conference. Member-colleges must maintain certain minimum entrance and graduation requirements. This college exceeds these requirements.

ADMISSION OF WOMEN

The profession of pharmacy offers inducements to well educated, energetic young women, who can enter under the same conditions and with the same privileges as men.

THE SUMMER SCHOOL

I. HISTORICAL NOTE: the old "Summer Normal" at the University was a pioneer in the summer school field. It was established in 1877 by Dr. Kemp P. Battle, and it seems to have been the first of its kind in America. It ran for eight years, and enrolled 2,480 teachers and students. It suspended in 1884.

Revived in 1894, the Summer School ran eleven years during its second period of usefulness, until 1904, when it was again suspended. During this period 1,541 teachers and students were enrolled.

It was revived again in 1907 and has been held every summer since that time with a gradually increasing attendance, reaching more than a thousand students in 1916.

II. OBJECT: the Summer School is designed primarily for teachers and for those who are preparing to teach. During the six weeks it is in session, the University places at the service of the teachers of the State its entire plant and equipment. It does this with a view to increasing the efficiency of the public school system by offering an opportunity for the better preparation of its teachers.

III. PROFESSIONAL AND CULTURE COURSES are planned for—

1. Teachers of Primary Grades.
2. Teachers of Grammar Grades.
3. High School Teachers and Principals.
4. Teachers of Special Subjects.
5. County and City Superintendents and Supervisors.
6. Candidates for Admission to College who wish to make up deficiencies in entrance requirements.
7. Teachers who expect to take the State Examination for Professional Certificates in July, whether applying for the original certificate, renewal, or additional credit.

IV. COURSES FOR COLLEGE AND UNIVERSITY CREDIT: many of the courses offered count for credit towards the A.B. and A.M. degrees. Graduates of standard colleges, may, in four summers, complete work leading to the A.M. degree. To undergraduates the opportunity is offered to pursue courses leading to the A.B. degree.

A bulletin containing detailed information may be had on application to N. W. Walker, Director of the Summer School, Chapel Hill, N. C.

THE BUREAU OF EXTENSION

The Bureau of Extension offers to the people of the State:

I. GENERAL INFORMATION: concerning books, readings, essays, study outlines and subjects of general interest.

II. LECTURES AND ADDRESSES: of a popular or technical nature for commencements or other special occasions.

III. CORRESPONDENCE COURSES: a series of extramural courses by correspondence, conducted by its regular faculty.

IV. GUIDANCE IN DEBATE AND DECLAMATIONS: material is sent from the library for use in debate and declamation upon the payment of transportation charges. Through the High School Debating Union the Bureau supervises a State-wide debate which culminates in the contest at the University for the Aycock Memorial Cup.

V. COUNTY ECONOMIC AND SOCIAL SURVEYS: supervision of the investigations of the county clubs whose purpose is to aid through wisely directed study the efforts to better the economic and social conditions in the various communities in the State.

VI. MUNICIPAL REFERENCE AIDS: the work of this division consists in the study of municipal legislative problems and in the furnishing of material that bears upon current municipal improvement and legislation.

VII. EDUCATIONAL INFORMATION AND ASSISTANCE: for teachers, principals, superintendents, school communities and boards. The School of Education acts as a clearing house for information concerning all phases of educational work and conducts a teachers' bureau as an aid to communities and schools in securing efficient teachers.

VIII. INFORMATION CONCERNING THE PROBLEMS OF PEACE AND RECONSTRUCTION: the University aims through this service to exert its influence in the direction of intelligent citizenship in the era of reconstruction. Its impulse is the belief that the crisis in democratic civilization brought on by the war demands the utmost efforts of American educational leadership in bringing the mind of the nation to grapple vigorously with the great problems which confront us at home and abroad.

IX. INFORMATION FOR WOMEN: this service rendered by the Bureau is directed along four lines:

- (1) Advice to young women interested in higher training.
- (2) Information in relation to social activities, industrial relations, community organizations, etc.
- (3) Study programs and material for civic leagues, community clubs, parent-teacher associations, etc.
- (4) Special study course outlines for the North Carolina Federation of Women's Clubs.

X. INSTRUCTION IN ROAD ENGINEERING: under the direction of the North Carolina Highway Commission the Department of Civil Engineering of the University gives instruction in highway engineering through the medium of a Road Institute held annually at the University.

Special bulletins containing full information regarding the above lines of service may be had on application to the Bureau of Extension, University of North Carolina, Chapel Hill, N. C.

Part Four—Courses of Instruction

DEPARTMENT OF BOTANY

(For description of Biological Laboratories, see page 37.)

Courses for Undergraduates

1. General Botany: an introduction to the structure and classification of plants. Lectures with laboratory work. Freshman, Sophomore, Junior and Senior elective. *Fall or Spring Quarter*. Professor COKER and Instructor.

Laboratory fee, \$3.00.

2-3. Special Morphology of the Fungi, with attention to plant diseases, the culture of lower fungi, and the identification of mushrooms. Lectures with laboratory and field work. Junior and Senior elective. Prerequisite Botany 1. *Double Course. Fall and Winter Quarter*. Professor COKER and Instructor.

Laboratory fee, \$3.00 a quarter.

4. Structure and classification of Seed Plants with special attention to agricultural problems. Sophomore, Junior and Senior elective. Prerequisite Botany 1. *Spring Quarter*. Professor COKER.

Laboratory fee, \$3.00.

Course for Graduates

5-6-7. Plant Morphology: advanced work in the embryology and anatomy of plants. The student is required to collect and prepare material for the microscopic study of special problems. Theses. *Triple Course, Fall, Winter and Spring Quarter*. Professor COKER.

Laboratory fee, \$3.00 a quarter.

DEPARTMENT OF CHEMISTRY

Courses for Undergraduates

1-2. General Descriptive Chemistry: lectures with laboratory work. *Fall and winter or winter and spring quarter.* Professors VENABLE, BELL AND DOBBINS, Mr. SMITHEY and Assistants.

Laboratory fee, \$2.50 a quarter.

8. Chemical Equations: a detailed study of the reactions of the elements and their compounds. Lectures and text-books. Prerequisite, Chemistry 41-42. *Spring Quarter.* Professor DOBBINS.

11. Industrial Chemistry: The methods and economics of the chemical industries; acids, alkalies, fertilizers, etc. Lectures and text-books. Prerequisite Chemistry 1-2. *Fall Quarter.* Professor VENABLE.

12. Industrial Chemistry: The methods and economics of the chemical industries; metals and textiles. Lectures and text-books. Prerequisite Chemistry 1-2. *Winter Quarter.* Professor VENABLE.

13. Chemistry of Foods: Digestion processes; and the composition, preservation, adulteration and industrial production of foods. Prerequisite, Chemistry 1-2. *Spring Quarter.* Professor VENABLE.

18. History of Chemistry: with discussion of the development of chemical theories. Prerequisites, Chemistry 61-62 and 81-82. *Spring Quarter.* Professor VENABLE.

21-22-23. Research for Seniors. Prerequisite, Chemistry 45-46, 47-48, 61-62, 81-82. Professors VENABLE, WHEELER, and BELL.

Laboratory fee, \$7.50.

31. Qualitative Analysis. Laboratory work and lectures. Prerequisite, Chemistry 1-2. *Spring Quarter.* Professor WHEELER, and Messrs. RICHARDSON, SMITH and SPRY.

Laboratory fee, \$10.00.

41. Elementary Quantitative Analysis. Gravimetric Analysis. Laboratory work, lectures and stoichiometric exercises. Prerequisite, Chemistry 31. *Fall Quarter*. Professor BELL and Mr. CUMMINGS.

Laboratory Fee, \$7.50.

42. Elementary Quantitative Analysis. Volumetric Analysis: Laboratory work, lectures and stoichiometric exercises. Prerequisite, Chemistry 41. *Winter Quarter*. Professor BELL and Mr. CUMMINGS.

Laboratory fee, \$7.50.

44. Elementary Quantitative Analysis: a brief course in gravimetric methods, followed by a more extended course in volumetric methods. Prerequisite, Chemistry 31. Open only to B.S. IV and Pre-Medical students. *One Quarter*. Professor BELL and Mr. SMITHEY.

Laboratory fee, \$5.00.

45. Technical Quantitative Analysis: Fuels and Gas Analysis. Prerequisite, Chemistry 41-42. *Fall Quarter*. Professor DOBBINS.

Laboratory fee, \$5.00.

46. Technical Quantitative Analysis: Water, Fertilizers, Iron and Steel, Cotton Products, etc. Prerequisite, Chemistry 41-42. *Winter Quarter*. Professor DOBBINS.

Laboratory fee, \$5.00.

47. Technical Analysis: Spectroscopic and Microchemical Methods. Prerequisite, Chemistry 41-42. *Spring Quarter*. Professor DOBBINS.

Laboratory fee, \$5.00.

61. Organic Chemistry. The Aliphatic Series. Prerequisite, Chemistry 31. *Spring Quarter*. Professor WHEELER.

Laboratory fee, \$5.00.

62. Organic Chemistry. Carbocyclic Series. Prerequisite, Chemistry 61. *Fall Quarter*. Professor WHEELER.

Laboratory fee, \$5.00.

63. Identification of Pure Organic Compounds. Prerequisite, Chemistry 62. *Spring Quarter*. Professor WHEELER.
Laboratory fee, \$5.00.

64. Advanced Organic Chemistry. Reports on assigned topics with conferences. Library work. Prerequisite, Chemistry 62. *Winter Quarter*. Professor WHEELER.

81. Physical Chemistry. Study of the properties of solids, liquids and gases, and of their relation to chemical constitution. Prerequisite, Chemistry 41-42. *Winter Quarter*. Professor BELL.
Laboratory fee, \$2.50.

82. Physical Chemistry. The theory of solutions. Prerequisite, Chemistry 81. *Spring Quarter*. Professor BELL.
Laboratory fee, \$2.50.

83. Physical Chemistry. The methods of physical chemistry as applied to industrial processes. Lectures and text-books. Prerequisite, Chemistry 81-82. *Fall Quarter*. Professor BELL.

84. Physical Chemistry. Electrochemistry. Lectures and text-books. Prerequisite, Chemistry 81-82. *Spring Quarter*. Professor BELL.

Courses for Graduates

14-15-16. Advanced Technical Chemistry. Seminar Course: readings and discussions of recent advances in Technical Chemistry. This course extends throughout the year. Professor VENABLE.

24-25-26. Advanced Inorganic Chemistry. Seminar Course: readings and discussions of recent advances in inorganic chemistry. This course extends throughout the year. Professor VENABLE.

27-28-29. Research in Inorganic, Analytical and Industrial Chemistry. This course (or 77-78-79 or 97-98-99) is intended for applicants for advanced degrees. Laboratory work with frequent conference with the professor and reference to the literature relating to the subject of research. The subject of research must be assigned or approved by the professor. This course extends throughout the year. Professor VENABLE.

Laboratory fee, \$10.00 a quarter.

74-75-76. Advanced Organic Chemistry. Seminar course: readings and discussions of special chapters in organic chemistry. This course extends throughout the year. Professor WHEELER.

77-78-79. Research in Organic Chemistry. The statements made in regard to Course 27-28-29 apply also to this course. Professor WHEELER.

Laboratory fee, \$10.00 a quarter.

94-95-96. Advanced Physical Chemistry. Seminar course: readings and discussions of recent advances in physical chemistry. This course extends throughout the year. Professor BELL.

97-98-99. Research in Physical Chemistry. The statements made in regard to Course 27-28-29 apply also to this course. Professor BELL.

Laboratory fee, \$10.00 a quarter.

The Journal Club meets fortnightly. The current journals, American, English, German, and French, both the purely scientific and the technical, are reviewed by the students and instructors. Attendance is expected of students in advanced courses.

COMPARATIVE LITERATURE.

1. The History and Development of the Drama. *Half Course. Fall Quarter.*

3. Types of Literature. *Half Course. Winter Quarter.*

NOTE.—Courses in comparative Literature are administered by a special committee composed of Professors Greenlaw, Howe, and Toy.

DEPARTMENT OF ECONOMICS AND FINANCE

Courses for Undergraduates

Economics 1-2. General Economics. A survey of the principles underlying our industrial life, with practical applications and problems. This course is a prerequisite for all advanced courses in Economics. Sophomore and Junior Elective. *Double course, Fall and Winter or Winter and Spring Quarters.* Professor CARROLL.

Economics 3-4. Money and Banking. Junior and Senior elective. *Double course, Fall and Winter Quarters.* Professor RAPER.

Economics 5. Accounting. Junior and Senior elective. See Bulletin of the School of Commerce and Finance.

Economics 6. Insurance. Property, Social (for industrial wage-workers), Life. Junior and Senior elective. *Spring Quarter*. Professor RAPER.

Economics 9. Transportation. Especially of the railway type. Junior and Senior elective. *Fall Quarter*. Professor RAPER.

Economics 10. Labor Problems. A study of the existing wage system and its chief problems. Junior and Senior elective. *Half course, Spring Quarter*. Professor CARROLL.

Economics 13-14. Public Finance. A study of the expenditures and the revenues of the State, National and local. Special emphasis upon the income and property taxes. Senior elective. *Double course, Winter and Spring Quarters*. Professor RAPER.

Economics 15. Industrial History: Especially of England and the United States. Sophomore and Junior elective. *Half course, Spring Quarter*. Professor CARROLL.

Economics 16. Theories of Economic Reform. An analysis of the leading proposals for reform in the present economic system, including Socialism, Bolshevism, Labor Copartnership and Industrial Democracy. Senior elective. *Half course, Fall Quarter*. Professor CARROLL.

Courses for Graduates

Courses 3-4, 6, 9, 13-14, and 16.

For courses in Corporation Organization, Finance and Management; in Commerce and Marketing; in Advanced Accounting, see Bulletin of the School of Commerce and Finance.

DEPARTMENT OF APPLIED RURAL ECONOMICS AND SOCIOLOGY

Courses for Undergraduates

1-2-3. Formal Course in Rural Economics: a background for defining and interpreting the economic problems of country life in North Carolina; Carver's *Principles of Rural Economics*. References: Nourse's *Readings in Agricultural Economics*, Carver's *Selected Readings in Rural Economics*, *Country Life* (American Academy of Social and Political Science). Junior and Senior elective. *Triple course, Fall, Winter and Spring Quarters*. Professor BRANSON.

5-6-7. Constructive Studies in Rural Sociology; Gillette's *Constructive Rural Sociology*. References: Wolfe's *Readings in Social Problems*, Vogt's *Introduction to Rural Sociology*, Fiske's *Challenge of the Country*, Wilson's *Evolution of the Country Community*, *Sociology of Rural Life*, Proceedings of the American Sociological Society, Vol. IX, 1916, *The Georgia Club*, and A

Survey of Montgomery County, Md., bulletins of the Federal Bureau of Education, *The Arkansas and the Tennessee Survey*, issued by Dr. Warren H. Wilson. Junior and Senior elective. *Triple Course. Fall, Winter and Spring Quarters.* Professor BRANSON.

9-10-11. Laboratory Course in Rural Economics and Sociology; home-county and home-state studies, research work and surveys. This course parallels and accompanies courses 1-2-3 and 5-6-7, Junior and Senior elective. *Triple course. Fall, Winter and Spring Quarters.* Professor BRANSON.

Course for Graduates

3. Laboratory Courses in Rural Economics and Sociology; home-county and home-state studies, research work, and surveys. Professor BRANSON.

The department headquarters are a clearing house of economic and social information about the State, and are open to students of all classes and departments during the morning hours of every day, and on Monday, Wednesday, and Friday afternoons, 3:30 to 6:00 o'clock.

DEPARTMENT OF EDUCATION

Principles of Education

1. Public Education as a National Asset. Required of Freshmen in the School of Education. *Spring Quarter.* Professor

4. Theory and Practice of Education. Junior and Senior elective. *Fall Quarter.* Professor NOBLE.

41. Educational Psychology; elementary course. Junior elective. Prerequisite, Psychology 1. *Fall Quarter.* Professor CHASE.

42. Educational Psychology; advanced course. Junior elective. Prerequisite, Education 41. *Winter Quarter.* Professor CHASE.

51. Principles of Secondary Education. Required for State high school teachers' certificate. Required of Juniors or Seniors. *Fall or Winter Quarter.* Professor WILLIAMS.

61. Principles of Public School Administration. Junior and Senior elective. *Winter Quarter.* Professor WILLIAMS.

63. Problems in Public School Administration. Graduate course open to Seniors. *Half Course. Spring Quarter.* Professor WILLIAMS.

Methods of Education

2. General Methods in Elementary Education. Sophomore elective. *Fall or Winter Quarter*. Professor NOBLE.

3. General Methods in Elementary Education. Sophomore elective. *Winter or Spring Quarter*. Professor NOBLE.

5. Observation of Teaching. Senior elective. Prerequisite, Education 52. *Fall Quarter*. Professor WILLIAMS.

52. General Methods in Secondary Education. Required for State high school teachers' certificate. Required of Juniors and Seniors. *Fall or Spring Quarter*. Professor WILLIAMS.

62. Educational Measurements. Senior elective. *Spring Quarter*. Professor WILLIAMS.

Library Administration 1. The Use of Books. Junior and Senior elective. *Half course, Winter Quarter*. Professor L. R. WILSON.

(Courses in Special Methods will be announced later.)

History of Education

22. General History of Education. Junior and Senior elective. *Fall Quarter*. Professor NOBLE.

23. Current Education. Junior and Senior elective. *Half course, Winter Quarter*. Professor NOBLE.

24. Current Education. Junior and Senior elective. *Half course, Spring Quarter*. Professor NOBLE.

25. History of Secondary Education. Senior elective. *Winter Quarter*. Professor WILLIAMS.

27. American Education. Graduate course open to Seniors. Professor NOBLE.

(Courses in the Principles, Methods, and History of Rural Education will be announced later.)

DEPARTMENT OF ELECTRICAL ENGINEERING**Courses for Undergraduates**

1-2-3. Elements of Electrical Engineering. A course designed for students in Chemistry and Civil Engineering. Prerequisite, Physics 1-2, and Mathematics 4. *Triple course, Fall, Winter and Spring Quarters*. Professor LEAR.

Laboratory fee, \$3.00 a quarter.

10-11-12. Elements of Electrical Engineering. A course in the fundamental concepts of Electrical Engineering. *One and one-half courses, Fall, Winter and Spring Quarters*. Professor MUSTARD.

Laboratory fee, \$6.00 a quarter.

20-21-22. Principles of Electrical Engineering. A continuation of course 10-11-12 with more emphasis on the mathematical theory. Prerequisite, E.E. 10-11-12. *One and one-half courses. Fall, Winter and Spring Quarters.* Professor LEAR.

Laboratory fee, \$3.00 a quarter.

24-25. Engineering Problems. A series of graded problems in the applications of mathematics to engineering. Prerequisite E.E. 10-11-12. *Winter and Spring Quarters.* Professor DAGGETT.

30-31-32. Direct and Alternating Current Machines. Application of the fundamental principles to the operation of the various types of electrical machines. Prerequisite, E.E. 20-21-22. *Triple Course. Fall, Winter and Spring Quarters.* Professor MUSTARD.

Laboratory fee, \$3.00 a quarter.

33-34-35. Electrical Measurements. A study of the various types of measuring instruments and of the methods of measuring electrical and magnetic quantities. Prerequisite, E.E. 20-21-22. *One and a half courses. Fall, Winter and Spring Quarters.* Professor LEAR.

Laboratory fee, \$3.00.

40-41-42. Special Studies in Electrical Machinery. A comparative study of commutation, armature reaction, regulation, etc., in direct and alternating current machinery. Prerequisite, E.E. 30-31-32. *Triple course. Fall, Winter and Spring Quarters.* Professor DAGGETT.

Laboratory fee, \$3.00 a quarter.

43. Electrical Engineering Applications. Power Transmission; Telephone and Telegraph Engineering. Prerequisite E.E. 30-31-32. *Half course. Fall Quarter.* Professor LEAR.

Laboratory fee, \$3.00.

44. Electrical Engineering Applications. Radio Engineering; Illumination and Photometry. Prerequisite, E.E. 30-31-32. *Half course. Winter Quarter.* Professor DAGGETT.

Laboratory fee, \$3.00.

45. Electrical Engineering Applications. Railway Engineering; Storage Batteries. Prerequisite, E.E. 30-31-32. *Half course. Spring Quarter.* Professor LEAR.

Laboratory fee, \$3.00.

Courses for Graduates

50-51-52. Electrical Engineering Seminar. Readings and Discussions of recent advances in Electrical Engineering. *Triple course. Fall, Winter and Spring Quarters.* Professors DAGGETT, MUSTARD AND LEAR.

53-54-55. Electrical Engineering Research and Design. The study of one or more definite problems in some particular field of Electrical Engineering. *Triple course. Fall, Winter and Spring Quarters.* Professors DAGGETT, MUSTARD AND LEAR.

MECHANICAL ENGINEERING

1. Heat engines. Construction, operation and maintenance of the principal types of boilers, steam-engines and turbines. *Fall Quarter.* Professor DAGGETT.

2. Engineering Thermodynamics. A practical study of the fundamental laws governing the transformation of heat energy into useful work. *Winter Quarter.* Professor DAGGETT.

3. Steam and Hydro-Electric Power Plants. Construction, operation, and management of factory power plants and central stations; economics and cost of power; rates. *Spring Quarter.* Professor DAGGETT.

DEPARTMENT OF ENGLISH

1. Freshman English. Constant practice in writing; intensive reading in English and American prose. *Every Quarter.* Professors FOERSTER (Chairman), BOOKER, HANFORD, DARGAN, THORNTON, MESSRS. STEADMAN, MOFFATT, WHITFIELD.

2. English Composition. A continuation of English 1 for those who need it. *Winter or Spring Quarters.* Professor FOERSTER and Assistants.

3-4. English and American Literature. Required of Sophomores. *Double course. Fall and Spring, or Winter and Spring Quarters.* Professors HANFORD (Chairman), GREENLAW, FOERSTER, BOOKER, DARGAN, Mr. STEADMAN.

5. The Study of Literature. This course aims to relate literature with the other arts, to determine the special characteristics of literature, and to suggest the most fruitful modes of study. Sophomore, Junior and Senior elective. *Fall Quarter.* Professor FOERSTER.

7. The Age of Chaucer. An introductory course in ballad, epic, drama, etc. Sophomore and Junior elective. Professor HANFORD and Mr. STEADMAN.

9. Shakespeare: Introductory Course. Sophomore and Junior elective. *Fall Quarter*. Professor KOCH.

11. The Writing of Technical Papers. Required of Sophomores in Engineering Courses. *Fall Quarter*. Professor THORNTON.

12. English and American Literature. Required of Sophomores in Engineering Courses. *Winter Quarter*. Professor THORNTON.

13. Debating. Sophomore, Junior and Senior elective. *Fall Quarter*. Professor McKIE.

14. Dramatic Interpretation. Sophomore, Junior and Senior elective. *Winter Quarter*. Professor McKIE.

15. The Forms of Public Addresses. Sophomore, Junior and Senior elective. *Spring Quarter*. Professor McKIE.

21-22-23. Advanced Composition. Open to Juniors and Seniors. The consent of the instructor must be secured before registering for this course. *One and one-half Courses*. *Fall, Winter, and Spring Quarters*. Professor GREENLAW and an assistant.

25. The Short Story. Junior and Senior elective. *Fall Quarter*. Assistant Professor THORNTON.

27. News Writing. An elementary course in journalism. *Winter Quarter*. Professor ———.

28. News Writing. An advanced course. *Spring Quarter*. Professor ———.

31-32-33. Dramatic Composition. A practical course in play-writing. Junior and Senior elective. *One and a half courses*. Professor KOCH.

34-35-36. Dramatic Composition. Advanced Course. This course is primarily for Seniors and graduates who have completed 31-32-33. *One and a half courses*. Professor KOCH.

38. Shakespeare. Junior and Senior elective. *Winter Quarter*. Professor KOCH.

41-42. The English Renaissance. Juniors, Seniors and graduates. *Winter and Spring Quarters*. Professor GREENLAW.

45. Milton. Juniors, Seniors and graduates. *Fall Quarter*. Professor HANFORD.

46. English Literature and the Classics. (Omitted 1919-1920.) Professor HANFORD.

47-48. English Literature in the Eighteenth Century. For Juniors, Seniors and Graduates. *Double Course. Winter and Spring Quarters.* Professor DARGAN and assistant.

51-52. The English Romantic Movement. For Juniors, Seniors and Graduates. *Double Course. Winter and Spring Quarters.* Professor HANFORD.

55. Victorian Literature. Junior and Senior elective. *Third Quarter.* Professor BOOKER.

59-60. American Literature. Junior and Senior elective. *Double Course. Fall and Winter Quarters.* Professor FOERSTER.

61-62. English Literature: a course in great books, primarily designed for Juniors and Seniors who do not elect English for a major or a minor subject. *Double Course. Fall and Winter Quarters.* Professor BOOKER.

66. The English Novel. *Fall Quarter.* Professor DARGAN.

69. The Modern Drama. Junior and Senior elective. *Spring Quarter.* Professor KOCH.

71-72. Old English. *Double Course. Fall and Winter Quarters.* Mr. STEADMAN.

75-76. Chaucer. For Juniors, Seniors and Graduates. *Winter and Spring Quarters.* Mr. STEADMAN.

83-84-85. Seminar. For Seniors and Graduates. Professors GREENLAW, HANFORD, and FOERSTER.

DEPARTMENT OF GEOLOGY

Courses for Undergraduates

1. Introduction to Geology: lectures with field work; laboratory work on common minerals and rocks. The course deals with physical Geology, with processes and their results. Sophomore, Junior or Senior elective. *Fall or Spring Quarter.* Professor COBB, Messrs. DAVIS and ANDREWS.

Laboratory fee, \$2.00.

2. Historical Geology: lectures with laboratory work on rocks and fossils. Sophomore, Junior or Senior elective. *Winter Quarter.* Professor COBB, Messrs. DAVIS and ANDREWS.

Laboratory fee, \$3.00.

3-4. Mineralogy: crystallography, physical and chemical properties of minerals, blowpipe analysis; lectures, laboratory work and field work. Junior or Senior elective. *Double Course. Fall and Winter Quarters.* Mr. BYNUM.

Laboratory fee, \$5.00 a quarter.

7. Principles of Geology, including history of geological science: lectures, field work and library work, with reports. Junior and Senior elective. *Fall Quarter*. Professor COBB and Mr. ANDREWS. Laboratory fee, \$3.00.

8-9. Stratigraphy: lectures, with laboratory work and field work, conferences and theses. Senior elective. *Double Course. Fall and Winter Quarters*. Professor COBB and Mr. BYNUM. Laboratory fee, \$5.00 a quarter.

11. Ore Deposits: lectures, laboratory work and reports. Junior and Senior elective. Prerequisite, Geology 1-2, and Chemistry 1-2. *Fall Quarter*. Professor _____. Laboratory fee, \$2.00.

12. Nonmetallic Mineral Deposits: lectures, laboratory work and reports. Junior and Senior elective. Prerequisite, Geology 1-2, and Chemistry 1-2. *Winter Quarter*. Professor _____. Laboratory fee, \$2.00.

13. Petrology: laboratory work on rocks. Junior and Senior elective. Prerequisite, Geology 1-2, and Chemistry 1-2. *Spring Quarter*. Professor _____. Laboratory fee, \$2.00.

14. Petrography: lectures, laboratory work on the microscopic physiography of rock-forming minerals. Senior elective. *Winter Quarter*. Professor _____. Laboratory fee, \$3.00.

21-22. Commercial and Industrial Geography: lectures, library work and laboratory work. Seniors and Graduates. *Double Course. Fall and Winter Quarters*. Professor COBB and Mr. ANDREWS. Laboratory fee, \$2.00 a quarter.

23-24. Origin and Nature of Soils: lectures, field work, laboratory work and theses. Junior and Senior elective. *Winter and Spring Quarters*. Professor _____. Laboratory fee, \$2.00.

25. Advanced Course in Physiography: lectures, field work and laboratory work. Senior elective. Prerequisite, Geology 1-2. *Fall Quarter*. Professor COBB. Laboratory fee, \$2.00.

42. Mineral and Ore Deposits: lectures supplemented by laboratory and field work. *Spring Quarter*. Professor PRATT.

43. Advanced Work in Mineralogy. Senior elective. *Spring Quarter*. Professor PRATT.

51-52-53. Advanced field work and special research in Geology or Geography. Problems and work adapted to the special needs of the student. For graduates and for especially prepared Seniors. *Triple Course*. *Fall, Winter and Spring Quarters*. Professors COBB and———, and assistants.

Courses for Graduates

Courses 8-9, 21-22, 51, 52, 53 and in addition:

54. Special Research and Geology and Geography: the student is expected to devote six weeks to work in the field, accompanied by the instructor, and to work up his results during the college year, the entire research constituting a full course. Professor COBB.

The Geological Seminary meets fortnightly for the review and discussion of current geological literature, and for the presentation of original papers.

DEPARTMENT OF GERMANIC LANGUAGES

Courses for Undergraduates

1-2. Elementary Course: grammar; written and oral exercises; translation; sight reading. This course may be counted for credit towards the degree by those only who have fulfilled the entrance requirement in two other foreign languages, and provided it is followed by German 3-4. *Double Course*. *Fall and Winter or Winter and Spring Quarters*. Professors TOY and BROWN and Mr. ——

3-4. Translation, sight reading, composition, grammar. Freshman and Sophomore elective. *Double Course*. *Fall and Winter Quarters*. Professors TOY and BROWN and Mr.———.

11. Practice in writing and speaking German. Prerequisite, German 3-4. Junior and Senior elective. *One Quarter*. Professor BROWN.

This course may be elected only by students who have taken or are taking one of the advanced courses described below.

21-22. Lessing: *Minna von Barnhelm*; Schiller: *Die Jungfrau von Orleans*, *Wilhelm Tell*; Goethe: *Iphigenie auf Tauris*, or *Egmont*. Sophomore, Junior and Senior elective. Prerequisite, German 3-4. *Double Course. Fall and Winter or Winter and Spring Quarters.* Professor TOY.

23. Romanticism in Germany: lectures; reading of selected texts. Sophomore, Junior and Senior elective. Prerequisite, German 3-4. *Fall or Spring Quarters.* Professor TOY.

25-26. German Literature in the nineteenth century since Goethe's death. Lectures and reading of representative works. Sophomore, Junior and Senior elective. Prerequisite, German 3-4. *Double Course. Fall and Winter or Winter and Spring Quarters.* Professor BROWN.

Courses 21-22, 23, 25-26, are parallel in grade. They present an introduction to the study of German literature.

41-42. Goethe's Life and Works. Lectures, reading, reports. Götz von Berlichingen, Werthers Leiden, Tasso, Gedichte, Hermann und Dorothea, Dichtung und Wahrheit. References: Scherer's and Francke's histories of German literature. English and German works on Goethe's life. Junior and Senior elective. Prerequisite, German 21-22, or 23, or 25-26. *Double Course. Two Quarters.* Professor BROWN.

This course may be elected only after consultation with the instructor.

43-44. Goethe: *Faust*, Parts I and II. Junior and Senior elective. Prerequisite, German 21-22, or 23, or 25-26. *Double Course. Two Quarters.* Professor TOY.

This course may be elected only after consultation with the instructor.

45-46. Kleist and Hebbel. Translation and interpretation of selected dramas; lectures and collateral reading. Junior and Senior elective. Prerequisite, German 21-22, or 23, or 25-26. *Double Course. Two Quarters.* Professor BROWN.

This course may be elected only after consultation with the instructor.

61. Gothic: Braune's *Gotische Grammatik*; selected parts of Paul's *Grundriss der Germanischen Philologie*. Introduction to Germanic Philology. Junior and Senior elective. Prerequisite, German 21-22, or 23, or 25-26. *One Quarter.* Professor TOY.

63. Old High German: Braune's *Althochdeutsche Grammatik*; Braune's *Althochdeutsches Lesebuch*. Junior and Senior elective. Prerequisite, German 21-22, or 23, or 25-26. *One Quarter*. Professor TOY.

67. Middle High German: Wright's *Middle High German Primer*, 3d Edition; von Kraus' *Mittelhochdeutsches Uebungsbuch*; translation into New High German. Junior and Senior elective. Prerequisite, German 21-22, or 23, or 25-26. *One Quarter*. Professor BROWN.

This course may be elected only after consultation with the instructor.

A certificate is granted to a student who has completed with credit any four courses exclusive of Course 1-2.

Courses for Graduates

Courses 41-42, 43-44, 45-46, 61, 63, 67.

NOTE.—Courses 11, 41-42, 43-44, 45-46, 61, 63, 67 will be given, if they are desired by a sufficient number of students. In any case the department reserves the right to withdraw a course for which the registration is very small.

Students who desire to take any of these courses are advised to confer in advance with the instructors concerned.

DEPARTMENT OF GREEK

Courses for Undergraduates

1-2. Beginners Greek. A course for students who have had no opportunity of studying Greek in the preparatory schools. This course may be counted for credit towards the degree by those who have fulfilled the entrance requirement in two other foreign languages, and provided it is followed by Greek 3-4. *Double Course. Fall and Winter Quarters*. Professor BERNARD.

3-4. (1) Greek prose: a course continuing Greek 1-2. Xenophon, *Anabasis*, *Symposium*; Lycias, *Selected Speeches*; (2) Homer, *Iliad*, Books I, II, III, and *Odyssey*, Book VI. Freshman elective. *Double Course. Fall and Winter Quarters*. Professor BERNARD.

5. Plato, *Apology* and *Crito* with selections from the other Socratic dialogues. Lectures on Greek life, politics, religion and literature. Sophomore elective. Prerequisite, Greek 3-4. *Winter Quarter, or on application*. Professor BERNARD.

6. Euripides, *Alcestis*; Aristophanes, *Frogs*. Lectures on the drama. Sophomore elective. Prerequisite, Greek 3-4. *Spring Quarter or on application*. Professor BERNARD.

11. Homer: rapid reading of entire *Odyssey* with Humeric Study. Prerequisite, Greek 3-4. Sophomore, Junior and Senior elective. *Spring Quarter or on application*. Professor BERNARD.

21-22. Greek Drama: An extended reading and study of the Greek drama with lectures on the origin, history and structure of the drama. Prerequisite, Greek 6. *Double Course. Two Terms on application*. Professor BERNARD.

23-24-25. Greek Drama in English Translations. A course designed to embrace the origin, development, technique and content of the entire Greek Drama, with emphasis on the tragedy as one interpretation of Greek life and thought as a contribution to world progress. Open to Graduates and such Seniors and Juniors as may be admitted by the instructor. *One and a half courses. Three Quarters*. Professor BERNARD.

NOTE.—The department reserves the privilege of substituting other elective courses as offered in the catalogue of 1917-1918 for the elective courses offered above on application of a sufficient number of students, but readapted to the three quarter system.

DEPARTMENT OF HISTORY

Courses for Undergraduates

1-2. Foundations of Modern History. A general course dealing with the fundamental factors of modern civilization in Europe and the United States. Lectures, text-books and readings. Required of all Freshmen. *Double Course. Two Quarters*. Professors HAMILTON, WAGSTAFF and PIERSON.

3-4. English History. The purpose of this course is to convey a good working knowledge of English history and broaden it into a survey of the part the Anglo-Saxon race has played in world history. Text-book, readings and lectures. Sophomore, Junior and Senior elective. *Double Course. Fall and Winter Quarters*. Professor WAGSTAFF.

5-6. Comparative Government. An intensive study of the governmental and social institutions of the leading states of the modern world. Text-books, lectures, discussion and reading. Sophomore, Junior and Senior elective. *Double Course. Fall and Winter Quarters*. Professor HAMILTON.

8. The Constitution of the United States. An intensive study of the workings of the American Constitution. Lectures, discussions and analysis of cases. Junior and Senior elective. *Fall Quarter*. Professor HAMILTON.

9-10. Latin-American History. A careful study of the history, geography, political and social institutions, and the economic development and possibilities of Latin-American countries. Sophomore, Junior and Senior elective. *Double Course. Fall and Winter Quarters*. Professor PIERSON.

11-12. Mediæval Europe. The development of Europe and its civilization from the decline of the Roman Empire to the end of the fifteenth century. Text-books, readings and lectures. Junior and Senior elective. *Double Course. Fall and Winter Quarters*. Professor WAGSTAFF.

14. Modern Europe. A study of modern and contemporary Europe from the angle of the primary forces that shaped the life of European nations during the past hundred and fifty years. Text-book reading and lectures. Junior and Senior elective. *Spring Quarter*. Professor WAGSTAFF.

15-16. Classical History. Professor PIERSON. (To be omitted in 1919-1920.)

22. The Protestant Revolt. Professor PIERSON. (To be omitted in 1919-1920.)

23. The French Revolution and the Napoleonic Period. A course which deals with the causes—political, intellectual, social and economic—events and the results of the French Revolution. Lectures, text-books and readings. Junior and Senior elective. *Spring Quarter*. Professor PIERSON.

25-26. Modern Municipal Government. Professor PIERSON. (To be omitted in 1919-1920.)

28. The Federal Period. American History through the period 1789-1861. Text-books, readings, and lectures. Junior and Senior elective. *Winter Quarter*. Professor WAGSTAFF.

29. Civil War and Reconstruction. A course dealing with the more important constitutional, political and economic phases of the period from 1861 to 1876. Lectures, reading and reports. Junior and Senior elective. *Spring Quarter*. Professor HAMILTON.

30. Contemporary American History. Political and Social relations in America from the close of the Civil War to the beginning of the World War. Lectures, text-books and readings. Junior and Senior elective. *Spring Quarter*. Professor PIERSON.

31-32. The Elements of Political Science. A general course in which a study is made of the principles of political science and of the important theories respecting the nature, origin, forms and ends of the State and of government. Lectures, text-books and readings. Junior and Senior elective. *Double Course. Fall and Winter Quarter*. Professor PIERSON.

A certificate is granted to a student who has completed with credit the equivalent of nine courses in History.

Courses for Graduates

33-34. American Political Theory: a course respecting the political philosophy that has been developed in the United States. A seminar dealing with some selected phase. Open to Seniors. Lectures and reports. *Half Course*. Professor PIERSON.

17-18. North Carolina History: a seminar course. Lectures and reports. Professor HAMILTON.

DEPARTMENT OF LATIN

Courses for Undergraduates

1-2. Cicero, De Senectute; Terence, Phormio; Livy, Selections; Horace, Odes; sight reading. Freshman elective. *Double Course. Fall and Winter or Winter and Spring Quarters*. Professors HOWE, HENRY, HARRER, and Mr. KEYES.

3. Selections from Pliny and Tacitus. Readings and discussions. Sophomore elective. *Fall Quarter*. Professors HOWE, HENRY, HARRER, and Mr. KEYES.

4. Roman Satire: readings from Horace, Petronius, Persius, and Juvenal; occasional lectures. Sophomore elective. *Winter Quarter*.

5. Cicero's Letters; the reading of selected letters and discussions of the history and politics of the time. Sophomore elective. *Winter Quarter*.

10. Latin Literature in English Translation: lectures and readings. This course is open to students who have no knowledge of the Latin language. Sophomore, Junior, and Senior elective. *Spring Quarter*. Professor HOWE.

11. Teacher's Course: pronunciation, forms, syntax, prosody, the art of translating, methods of instruction. Junior and Senior elective. Prerequisite, Latin 1-3. *Fall Quarter*. Professor HENRY.

12. Roman Historical Writers. Selections from the historians, discussions of their methods, lectures. Junior and Senior elective. Prerequisite, Latin 1-3. *Fall Quarter*. Professor HARRER.

13. Roman Dramatic Literature: a study of the historical development of Latin comedy and tragedy; reading of selected plays. Junior and Senior elective. Prerequisite, Latin 1-3. *Winter Quarter*. Professor HENRY.

14. The Latin Epic: the history of Latin Epic; detailed study of the *Æneid*. Junior and Senior elective. Prerequisite, Latin 1-3. *Spring Quarter*. Professor HOWE.

Courses for Graduates

12, 13 and 14, as above, and further

20-21-22. Latin Seminar: the study in detail of a particular author or period in Roman literature. *Triple Course*. *Fall, Winter and Spring Quarters*. Professor HOWE.

23-24. Latin Epigraphy and Palaeography. *Double Course*. *Winter and Spring Quarters*. Professor HARRER.

DEPARTMENT OF MATHEMATICS

Courses for Undergraduates

Pure Mathematics

1. Algebra: from Quadratics through Theory of Equations. Required of Freshmen. *Fall, or Winter, or Spring Quarters*. Professors HENDERSON, LASLEY, RANKIN, and HOBBS.

2. Plane Trigonometry and Logarithms. Required of Freshmen. *Fall, or Winter, or Spring Quarters*. Professors HENDERSON, LASLEY, RANKIN, and HOBBS.

3. Brief course in Analytic Geometry. Sophomore, Junior and Senior elective. *Fall or Spring Quarter*. Professors CAIN and HENDERSON.

4. Elementary Course in Differential and Integral Calculus (Cain's *Brief Course in the Calculus*). Sophomore, Junior and Senior elective. Prerequisite, Mathematics 3. *Fall or Winter Quarter*. Professors CAIN and HENDERSON.

5-6. Descriptive Geometry; Shades, Shadows, and Elementary Perspective; lectures, recitations. Junior and Senior elective. Prerequisite, Drawing 1-2. *Fall and Winter Quarters*. Mr. MORRISON.

9. Theory of Equations. Sophomore, Junior and Senior elective. Prerequisite, Mathematics 1-2. *Half Course. Fall Quarter*. Professor HENDERSON.

10. Differential Equations: elementary course. Junior and Senior elective. Prerequisite, Mathematics 11. *Half Course. Spring Quarter*. Professor HENDERSON.

11. Calculus. Junior and Senior elective. Prerequisite, Mathematics 4. *Fall or Winter or Spring Quarters*. Professor CAIN.

12. Analytic Mechanics. Junior and Senior elective. Prerequisite, Mathematics 11. *Fall, or Winter, or Spring Quarters*. Professor CAIN.

13-14. Theory of Equations (Burnside and Panton). Junior and Senior elective. Prerequisite, Mathematics 4. *Two Quarters*. Professor HENDERSON.

15-16. Differential Equations (Murray). Senior elective. Prerequisite, Mathematics 12. *Two Quarters*. Professor HENDERSON.

31-32. The Foundations of Geometry. Texts: Hilbert, Veblen; collateral reading. Senior elective. *Two Quarters*. Professor HENDERSON.

33-34. Principles and Methods of Teaching Elementary Mathematics. History and Methods of Teaching Elementary Mathematics. Prerequisite, Mathematics 1-2. *Two Quarters*. Professor RANKIN.

CIVIL ENGINEERING

1. Surveying and Plotting. Lectures, problems in the drawing room, field work. Prerequisite, Mathematics 2. *Fall or Spring Quarter*. Professors HICKERSON and SAVILLE.

3. Mechanics and Mechanism. *Winter Quarter*. Professor HICKERSON.

5. Plane Table Surveying and Mapping. Preparation and interpretation of topographical maps. Lectures and field work. *Half Course. Spring Quarter*. Professor SAVILLE.

9-10. Railroad Surveying and Railroad Engineering. Prerequisite, C.E. 1. *Double Course. Fall and Winter Quarters*. Professor JAMES.

11-12. Highway Engineering. Location, construction, and maintenance of roads. *Double Course. Fall and Spring Quarters*. Professor HICKERSON.

16. Materials of Construction. Lectures with laboratory work on tests of materials. *Winter Quarter*. Professor SAVILLE.

17. Mechanics of Materials. Lectures with laboratory work. Strength of materials, moments and shears, stresses in beams and columns, deflection of beams, torsion, etc. *Spring Quarter*. Professor SAVILLE.

18. Engineering Geology. Geological structures as influencing engineering construction, foundations, excavation, building materials, borings, tunnelling, etc. Prerequisite, Geology 1-2. *Half Course. Fall Quarter*. Professor SAVILLE.

19. Hydraulics. Flow of water in pipes, canals and rivers. Lectures, laboratory and field work. Prerequisite, Mathematics 11-12. *Fall Quarter*. Professor SAVILLE.

20. Water Power and Drainage Engineering. Prerequisite, C.E. 19. *Winter Quarter*. Professor SAVILLE.

21. Sanitary Engineering. Water supply and purification; sewerage disposal. Design, construction and operation as applied to municipalities and rural communities. Lectures, classroom work, and inspection trips. Prerequisite, C.E. 19. *Spring Quarter*. Professor SAVILLE.

23-24. Structures. A thorough study of outer and inner forces as applied to structures of various types. Prerequisite, C.E. 17. *Double Course. Fall and Winter Quarters*. Professor HICKERSON.

25. Reinforced Concrete Structures. Prerequisite, C.E. 23-24. *Spring Quarter*. Professor HICKERSON.

26-27. Bridge Design. Computations and drawings for the design of typical railroad and highway bridges of wood, steel and concrete: to be taken in connection with C.E. 24-25. *Double Course. Winter and Spring Quarters*. Professor HICKERSON.

Drawing

1-2. This course is designed to give the student who has never handled mathematical drawing instruments a thorough course of instruction in their use, and an understanding of the elementary principles of mechanical drawing. Text-book, French's *Engineering Drawing. Fall and Winter, or Winter and Spring Quarters*. Mr. MORRISON.

3-4. Civil Engineering Drawing: (a) Land survey and topographic mapping; (b) Advanced lettering: the Roman and Gothic letters and the arrangement of lettering on maps and titles; (c) Structural Drawing: a study of the drawing of girders, trusses, and various minor engineering structures. Prerequisite, Drawing 1-2. *Winter and Spring Quarters*. Mr. MORRISON.

5-6. Machine Drawing: A study of the representation of machine parts; detail and assembly drawings from models and sketches, careful attention being given to billing of material and to standard drawing-room practice and systems. The last few weeks of the course are devoted to the study of the elementary principles of mechanism and the solution of several problems based thereon. Prerequisite, Drawing 1-2. *Spring and Fall Quarters*. Mr. MORRISON.

11. The advanced theory and practice of perspective and its application to engineering structures. Senior elective. Prerequisites, Drawing 1-2 and Mathematics 5-6. *Half Course. One Quarter*.

12. Stereotomy: a course in the application of descriptive geometry to the making of drawings for masonry structures such as intersecting arches and walls, abutments, piers, and culverts. A study of warped surfaces and drawings for the helicoidal arch. Senior elective. Prerequisite, Mathematics 5-6. *Half Course. One Quarter*.

Courses for Graduates**Pure Mathematics**

Any of the following courses, 11-12 to 33-34, inclusive, may be elected; but not more than nine will ordinarily be given in any one year. Should more than this number be applied for, the course desired may be arranged on consultation with the instructor concerned.

Courses 11, 12, 13-14, 15-16, 31-32, 33-34 and in addition—

17-18. Advanced Differential and Integral Calculus. Prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

19-20. Vector Analysis. Prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

21-22. Modern Synthetic Geometry. Text: Russell. Prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor HENDERSON.

23-24. Modern Analytic Geometry. Text: Smith, C. Prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor HENDERSON.

25-26. Analytic Geometry of Space. Text: Smith, C. Prerequisite, Mathematics 3-4. *Both terms, three hours.* Professor HENDERSON.

27-28. An elementary course in Analysis. Lectures on the theory of functions of the real and the complex variable. Assigned work and collateral reading. Prerequisite, Mathematics 17-18. *Both terms, two hours.* Professor LASLEY.

29-30. Advanced Analytic Mechanics. Prerequisite Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

DEPARTMENT OF PHILOSOPHY**Courses for Undergraduates****Psychology**

1. Introduction to Psychology. Text, lectures, demonstrations. Sophomore, Junior and Senior elective. *Fall or Spring Quarters.* Professor CHASE.

7-8. Genetic Psychology. Lectures, assigned readings, theses. Senior elective. Prerequisite, Psychology 1, or Education 41-42. *Two Quarters.* Professor CHASE.

For courses in Educational psychology, see Department of Education, page 126.

Philosophy

10-11-12. Logic: the study of logic in life; lectures, with text-books. Junior and Senior elective. *One and a half courses. Fall, Winter and Spring Quarters.* Professor WILLIAMS.

13-14-15. Ethics: criticism and discussions. Junior and Senior elective. *One and a half Courses. Fall, Winter and Spring Quarters.* Professor WILLIAMS.

16-17-18. Philosophy: a study of the forces that shape life; lectures; theses. Junior and Senior elective. *One and a half Courses. Fall, Winter and Spring Quarters.* Professor WILLIAMS.

19-20-21. A companion Course to Philosophy 16-17-18. The aim of the course is to sketch the forces masterful in modern life. Junior and Senior elective. *One and a half Courses. Fall, Winter and Spring Quarters.* Professor WILLIAMS.

Courses for Graduates**Psychology**

Course 7-8.

Philosophy

Course 19-20-21 and in addition

22-23-24. Epistemology: a study of the Critical Philosophy; lectures, theses. First term: Prolegomena and Practical Reason, and the work that prepared the way for Kant. Second term: *Kritik der Reinen Vernunft.* *One and a half Courses. Fall, Winter and Spring Quarters.* Professor WILLIAMS.

DEPARTMENT OF PHYSICS**Courses for Undergraduates**

1. General Physics: Mechanics of solids, liquids and gases: Sound and Heat. Lectures, with text-book (Kimball's College Physics): problems: laboratory work. Sophomore, Junior and Senior elective. Prerequisite, Mathematics 1-2. *Fall or Winter Quarters.* Professor PATTERSON, Mr. SHARP and Assistants.

Laboratory fee, \$2.50.

2. General Physics: Light, Electricity and Magnetism. Lectures with text (Kimball's College Physics): Laboratory work. Sophomore, Junior and Senior elective. Prerequisite, Mathematics 1-2. *Winter or Spring Quarters.* Professor PATTERSON, Mr. SHARP and Assistants.

Laboratory fee, \$2.50.

3-4. Electricity and Magnetism: an advanced course, of a general nature, but especially adapted to the needs of medical students. Lectures, text-book, laboratory work. Junior and Senior elective. *Fall and Winter Quarters*. Professor PATTERSON.

5. Heat and Thermodynamics. Junior and Senior elective. Prerequisite, Physics 1-2. Mr. SHARP. (Not offered in 1919-1920.)

7. Modern Electrical Theory: the electron theory, electrolysis, conduction of electricity through gases, electrical nature of matter, radio-activity: lectures, recitation and laboratory work. Junior and Senior elective. Prerequisite, Physics 1-2. *Fall Quarter*. Professor PATTERSON.

9. Optics. A treatment of the fundamental principles of geometrical and physical optics. Lectures and laboratory work. Prerequisite, Physics 1-2. Junior and Senior elective. *Spring Quarter*. Mr. SHARP.

11. Descriptive Astronomy: a general course; lectures and recitations with use of lantern slides, telescope, etc. Junior and Senior elective. Prerequisite, Physics 1-2. *Spring Quarter*. Professor PATTERSON.

Courses for Graduates

Courses 5, 7, and 9.

DEPARTMENT OF ROMANCE LANGUAGES

French

1-2. Elementary Course. Essentials of French Grammar. Special attention given to pronunciation. It is aimed to make this course as practical as possible, with much oral work. This course may be counted for credit towards the degree by those only who have fulfilled the entrance requirement in two other foreign languages, and provided it is followed by French 3-4. *Double Course*. *Fall and Winter, or Winter and Spring Quarters*. Course 2 will also be given in the fall of 1919. Professors DEY, LEAVITT and STAAB.

3-4. Continuation of Course 1-2. Reading of modern French literature and newspapers, frequent composition and dictation. Freshman or Sophomore elective. *Double Course*. *Fall and Winter, or Winter and Spring Quarters*. Professors DEY, LEAVITT and STAAB.

5. Advanced Course: studies in reading and writing French. French phonetics. Reading of representative literature of the Nineteenth Century and of newspapers, with much collateral reading. Sophomore, Junior and Senior elective. Prerequisite, French 3-4. *Fall Quarter*. Professor DEY.

6. Continuation of French 5. Masterpieces of French literature in the Nineteenth Century, with much collateral reading and oral work. Sophomore, Junior and Senior elective. Prerequisite, French 5. *Spring Quarter*. Professor DEY.

7-8. French Conversation and Composition. The object of this course is to provide its members with the opportunity of acquiring facility in the use of the spoken language. Topics of general interest discussed; practice also in the writing of French. Junior and Senior elective. Prerequisite, French 3-4. *Double Course. Fall and Winter Quarters*. Professor DEY.

11-12. French Literature in the Seventeenth Century. Professor DEY. (To be omitted in 1919-1920.)

13-14. French Literature in the Eighteenth Century. Professor LEAVITT. (To be omitted in 1919-1920.)

15-16. French Literature in the Nineteenth Century. Romanticism: Lamartine, Hugo, Vigny, Musset, etc., and later literary movements. Lectures, reading, reports. Junior and Senior elective. Prerequisite, French 6. *Double Course. Winter and Spring Quarters*. Professor DEY.

No student is permitted to take French 1-2, and Spanish 1-2 at the same time.

A certificate is granted to a student who has completed with credit any four courses exclusive of Course 1-2.

Spanish

1-2. Elementary Course. Essentials of Spanish grammar. Special attention given to pronunciation. Reading of selected texts, with much oral drill. This course may be counted for credit towards the degree by those only who have fulfilled the entrance requirement in two other foreign languages, and provided it is followed by Spanish 3-4. *Double Course. Winter and Spring Quarters*. Professor LEAVITT.

3-4. Continuation of Course 1-2. Wide reading of modern Spanish authors. Sophomore, Junior and Senior elective. Prerequisite, Spanish 1-2. *Double Course. Fall and Winter Quarters*. Professor LEAVITT.

5. Practical Spanish. The object of this course is to give the student a wide vocabulary in modern Spanish. Special attention will be paid to South America: selections from South American history, newspaper and magazine articles dealing with the life and customs of the country will be read and some of its representative literature studied. (In the second term practice will be given in conversation and commercial correspondence.) Junior and Senior elective. Prerequisite, Spanish 1-2. *Spring Quarter*. Professor LEAVITT.

No student is permitted to take Spanish 1-2, and French 1-2 at the same time.

Italian

1-2. Elementary Course. Grammar, pronunciation, oral and written exercises, translation and reading at sight. Junior and Senior elective. Prerequisite, French 3-4. *Double Course. Two Quarters*. Professor DEY.

Courses for Graduates

French

Courses 11-12, 13-14, 15-16, and in addition—

23-24. Old French. Professor DEY. (To be omitted in 1919-1920.)

25-26. Provençal. Professor DEY. (To be omitted in 1919-1920.)

DEPARTMENT OF ZOOLOGY

(For description of Biological Laboratories, see page 37.)

1. Elements of Zoology: an introductory course giving an outline of the structure, physiological behavior and classification of animals. Lectures with laboratory work. Freshman, Sophomore, Junior and Senior elective. *Winter Quarter*. Professor WILSON, Messrs. EAGLE and ANDERSON.

Laboratory fee, \$5.00.

2. Comparative Anatomy: dissection of types, chiefly vertebrates with some invertebrates. Laboratory work with occasional lectures. Junior and Senior elective. *Spring Quarter*. Professor WILSON, Messrs. EAGLE and ANDERSON.

Laboratory fee, \$5.00.

3. Generalization and Theories of Biology: some of the facts and conclusions in the fields of evolution, heredity and individual development. Lectures. Junior and Senior elective. Prerequisite, Zoology 1. *Half Course. Fall Quarter*. Professor WILSON.

Laboratory fee, \$5.00.

4. Vertebrate Embryology: early stages in embryology of ascaris, starfish: segmentation and formation of germ layers in frog teleost: germ layers and development of characteristic vertebrate organs in chick: salient features in the development of mammals (rabbit, pig): fundamentals of microscopic technique. Laboratory work with occasional lectures. Junior and Senior elective. *Winter Quarter*. Professor WILSON.

Laboratory fee, \$5.00.

5-6-7. Morphology and Classification of the Invertebrates: dissection and microscopic study of types of the chief orders, with some consideration of life-histories: systematic diagnosis. Laboratory work with occasional lectures. Junior and Senior elective. *One and a half Courses. Fall, Winter and Spring Quarters*. Professor WILSON.

Laboratory fee, \$3.00 a quarter.

Courses for Graduates

Courses 3, 4, 5-6-7 and in addition—

8-9-10. Histology, Embryology and Regeneration: in the vertebrates and lower metazoa. *Triple Course. Fall, Winter and Spring Quarters*. Professor WILSON.

Laboratory fee, \$5.00 a quarter.

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